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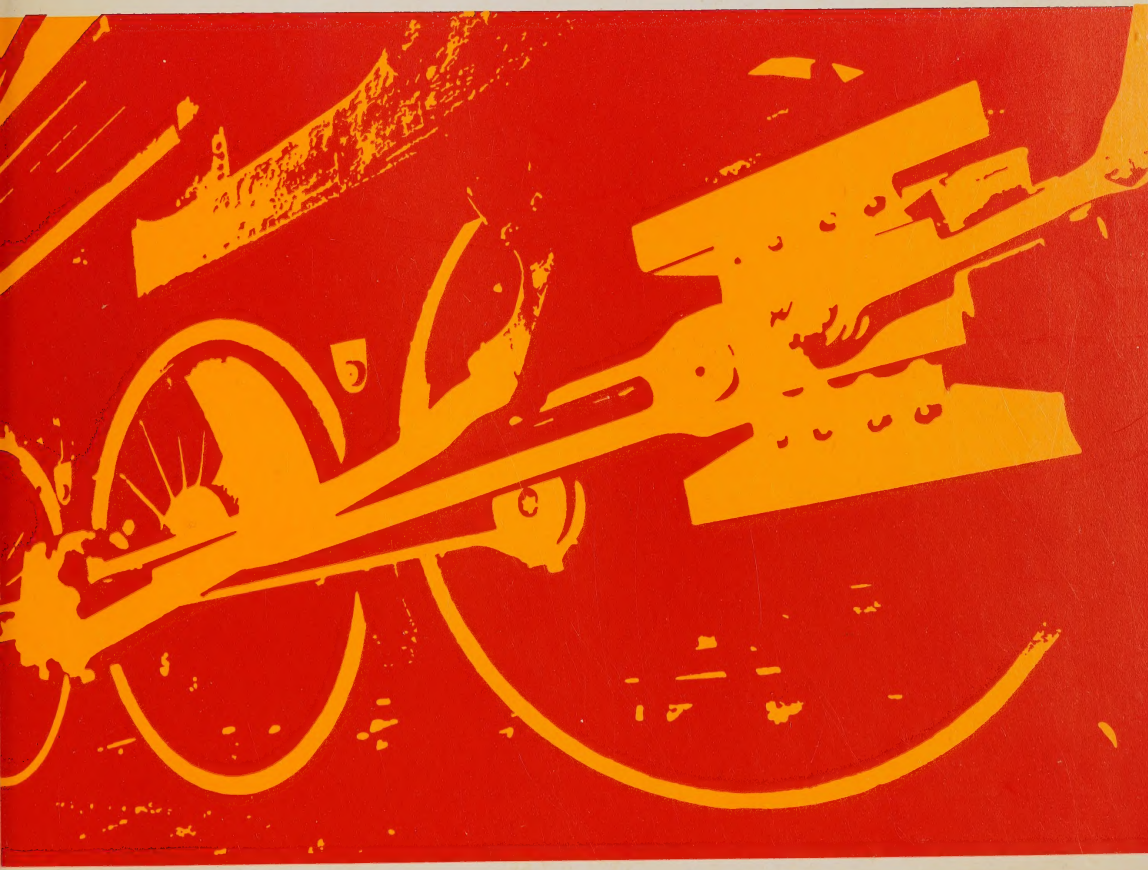
ONTARIO TASK FORCE

ON PROVINCIAL RAIL POLICY

WORKING PAPERS


ANALYSIS—VOLUME III

INTERIM REPORT — SEPTEMBER, 1980



Ontario

MARGARET SCRIVENER, M.P.P.
CHAIRMAN



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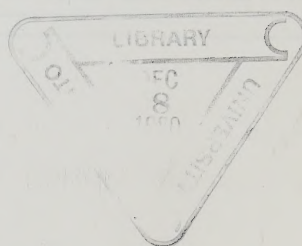
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PARLIAMENT BUILDINGS,
TORONTO
SEPTEMBER, 1980



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FOREWORD

When Members of the Ontario Task Force on Provincial Rail Policy commenced deliberations in January of this year, we wished to survey and evaluate the rail mode as fully as possible within the timeframe provided.

To expedite our investigations, the Task Force called upon various individuals and organizations to produce specific 'working papers' relating to various aspects of the railways and their interaction with our provincial community. Although several papers have been produced by private sector consultants, the vast majority are the result of research and investigation of specialist staff within the Government of Ontario.

The writers were invited to look ahead and, wherever appropriate, offer any recommendations which in their opinion might assist the Task Force in preparing its final report. The response has been gratifying and helpful, and on behalf of the Members of the Task Force I wish to express sincere appreciation to each of the participating Ministries for a job well done.

This resource document contained in three volumes is presented as part of the Interim Report of the Ontario Task Force on Provincial Rail Policy.

A handwritten signature in dark ink, reading "Margaret Scrivener." The signature is written in a cursive, flowing style.

Margaret Scrivener (Mrs.),
CHAIRMAN.

DEVELOPMENT OPPORTUNITIES

POTENTIAL RAIL OPPORTUNITIES IN RECREATION
AND
TOURISM

A DISCUSSION PAPER PRESENTED TO THE
PROVINCIAL RAIL POLICY TASK FORCE
BY THE
DIVISION OF TOURISM
OF THE
MINISTRY OF INDUSTRY AND TOURISM

Ministry of Industry and Tourism
Tourism Marketing Branch
July 3, 1980

INTRODUCTION

This discussion paper addresses the above task ¹ in an admittedly broad fashion. It does not present a detailed analysis nor offer substantiation for the conclusions presented. Indeed, the task as presented is so complex in its requirements and ramifications for the Province, that the formulation of a comprehensive rail policy should be considered before any action is taken in regard to this topic. We estimate that the task would take a qualified consultant a minimum of six months and an expenditure of \$75,000-100,000 to be properly executed.

1 (See Appendix 'A')

TOURISM

In 1979 total tourist expenditures in Ontario were \$6.6 billion.

This expenditure generated \$1.2 billion in taxes and 624,000 man-years of employment.

Tourism ranks second only to manufacturing in economic importance in Ontario, accounting for 11+% of Gross Provincial Product.

Ontario is its own best customer, Ontarians accounting for more than two thirds of the dollars spent in the province by tourists. However, Ontario has recently experienced tremendous growth in overseas visitors, with revenues from that segment nearly doubling to \$500 million in the past 5 years. Offshore revenues now account for one third of the foreign tourist dollars spent in Ontario. At \$900 million in 1979, the U.S. market still accounts for 65% of total international expenditures, but is decreasing relative to revenues from overseas. If present trends continue, the value of offshore revenues may more closely approach those from U.S. tourists. U.S. person-trips at 20.9 million in 1979 represent the largest foreign market, however, and are likely to remain so.

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TRAVEL DEFICIT

Canada's travel deficit in 1978 was \$1.7 billion, up from \$296 million in 1973. Ontario's share was 38.4%. The national deficit declined to about \$1.1 billion in 1979. However, Ontario's share of this deficit increased to about 45%.

MARKET POTENTIAL

Overall, total person-trips to Ontario have shown a fairly consistent annual growth rate of slightly over 6% since 1972.

By market segment, however, considerable variation exists. The overseas travel market increased an average annual rate of 13.4% between 1972 and 1979. A notable growth rate of 27% was realized in 1979.

This segment takes on added importance since it represents the lowest proportion of same-day trips.

The only market showing a decline over the 1972-79 period is the U.S. It still accounts, however, for 95% of all international person-trips to Ontario. The bulk of these trips originate in the Middle Atlantic and east North Central regions.

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DEMOGRAPHICS

Generally, the visitor to Ontario has a median age of 40; annual household income in excess of \$15,000.

Visitors with secondary education represent 71% or more of travellers.

FORECAST

It is anticipated that in 1980 expenditures in the tourism industry will total some \$7.6 billion, an increase of \$981 million over 1979 which will produce in turn close to \$176 million in additional provincial tax revenues.

Given the necessary planning and promotional stimulus, the value of tourism through this new decade could well exceed \$120 billion or \$21 billion worth of tax revenues. Indeed, tourism could well emerge as Ontario's single-most important industry by the year 2000.

TOURISM AND RAILWAYS

At present, rail realizes its maximum potential as an important component of the overall tourism transportation mix only in Europe. There, fast comfortable, convenient and frequent service is offered between many locations, with easy inter-connections possible between countries. Fares are structured to encourage tourism. Britrail and Eurail passes, for example, offer an inexpensive way for the out-of-country tourist to travel in Britain and Continental Europe. These passes are complemented by a variety of special discounts for local passengers. Fares are also relatively inexpensive: for instance, in Belgium, a 2nd class tourist pass, valid for all routes during a 5-day period within the 2 weeks for which the pass is good costs about \$47.00. Such fares are designed to foster rail travel by tourists, whether citizens or otherwise.

The key to the market success of passenger rail service in Europe is frequency, low cost and population density. In Germany alone for instance, there are some 20,000 passenger trains per day, more than in the U.S. and Canada combined.

Equipment and associated rail infrastructure in Europe is clean, modern and thoughtfully designed. For example, the German travel industry is presently designing special

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"holiday cars" for group travellers, so important is the tourist segment of the rail passenger business. However, it must be noted that this exemplary service exists for two reasons: the rail passenger business very clearly reflects national commitments to mass mode travel; and a web or matrix of interconnecting lines and systems makes rail travel to a wide variety of destinations a realistic proposition. In Europe railways do in fact provide a viable, alternative mode of travel to the automobile and aircraft. They are fast, efficient and dependable. This national commitment to rail travel can also support major industry. In Britain, for instance, British Engineering grosses \$500 million a year and employs 35,000 people.

NORTH AMERICA

Rail travel in the U.S. presents many of the problems encountered in Canada. Modern equipment is not abundant; roadbeds are in generally poor condition and trains are usually neither frequent, convenient nor dependable. Despite this, Amtrak does recognize the potential of passenger service and tourism, and is spending \$1 million this year to promote its new Western U.S. Superliner service out of Chicago. The promotional effort is aimed largely at the tourist and leisure market, which constitutes a growing segment of the present passenger mix. 284 of the Superliners are presently on order at a cost of some \$200,000,000. In the densely populated northeast a \$2.5 billion investment in new roadbeds in the NE Corridor (Washington/Boston) has recently been approved.

- 3 -

The problem in luring the travelling public to train travel is not only that the service is not frequent (or at least not perceived as such); it also suffers from an image problem. Trains are believed to be never on time, infrequent, inconvenient (the station is often in the suburbs), old, and the staff incompetent and/or rude. Roadbeds are of freight train quality - good enough for goods, but not people. The food, (when available), is considered over priced and poor even by airlines standards. The "image" problem is as much an impediment to the successful marketing of rail travel as are the problems related to equipment infrastructure, schedules, etc.

In Canada the same problems apply. As in the U.S. roadbeds are poor and passenger equipment old, (newest is 1968, oldest 1937). However, VIA has shown that despite aging equipment, inadequate roadbeds and substandard station facilities, there is a demand for rail travel, if the service is frequent and convenient. VIA now carry more passengers per day in the Windsor/Toronto corridor (14 trains/5600 passengers per day) than in the Montreal/Toronto corridor (9 trains/3700 passengers per day). But, frequency is a function of equipment availability. Unfortunately, VIA Rail is required to operate passenger services which it inherited in 1977 in Quebec and elsewhere, using the valuable equipment at lower occupancy when the real demand, which must go only partially served, is in South Central/South Western Ontario.

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Notwithstanding, VIA Rail claims that overall passenger rail traffic in Canada has increased 35% since 1976 and that tourist travel now represents 6% of total passengers carried. This is despite the fact that the absolute speed of point-to-point service has not increased significantly in the past decade and has in some instances actually decreased. In many areas the only reason for the passenger increase seems to be that there have been some fare reductions.

The mandate given to VIA Rail at its inception suggests that it was never expected that this service would be outstandingly successful in attracting rail travellers. VIA Rail was to provide passenger services to those centres which had rail service at the time VIA Rail was set up, in 1977. Since so many services has been abandoned by that time, many areas which might be considered for passenger train service could no longer be included in the VIA Rail schedule without difficulty. An extension of VIA's operating network, would, it appears, require clarification of the operating mandate as interpreted by Ministry of Transport, the Canadian Transportation Commission and VIA itself.

TRENDS

Vacation trends here and elsewhere suggest good potential for more packaged holidays with an emphasis on "one-stop" vacation destinations. For example, 500 packages per weekend are now being sold out of Detroit/Windsor into

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Toronto. VIA Rail estimates that significantly more packages could be sold were it not for the limitations imposed by lack of equipment to service this potential. The fact that this successful service operates from a Windsor terminus rather than Detroit is additional evidence of the potential.

At the same time, escalating energy prices and supply shortage possibilities may accelerate the demand for service to existing or developing tourist areas, using existing track. For example, VIA carried 24,000 recreationists into the Laurentians in 1978/79.

The success of VIA in marketing certain kinds of tourist services suggests that rail passenger service as related to tourism may be a viable proposition provided it reflects the needs of the market place.

RAIL EXCURSIONS

There are many short line railway operations both in Europe and in North America whose major function is to simply carry tourists on excursions. In Britain alone, steam powered tourist railways carry 1.7 million passengers. Similar operations in North America carry some 1.8 million per year. At least 13 of these carry over 100,000 passengers per year.

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In Canada, railway excursions are also very popular. The Agawa Canyon trip on the ACR; the ONR's Polar Bear Express and BC's Royal Hudson all are relatively successful from a passenger point-of-view. It is important to note, however, that in most cases, railway excursions are popular as attractions, not as a mode of transportation.

Indeed, the observation can be made that their success is directly related to the relative lack of competition from other transportation modes. In all probability the Agawa Canyon train trips would not exist if the Canyon was accessible by car, for instance. Its also extremely unlikely that the Polar Bear Express would attract much more than passing interest from the tourist if Moosonee was accessible by road (indeed, Moosonee would very likely lose its appeal as an "attraction" under the same circumstances).

The corollary is, of course, that when a train excursion does not represent the only method of access or transportation, and is not as convenient or competitive, then the quality of the "experience" it offers must be correspondingly increased. This can be accomplished by making the trip itself an experience or employing unique equipment.

There are, in essence, two kinds of rail excursions:

1. The excursion in which rail is the connecting link between point of origin and a destination attraction;

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and for which rail offers a viable mode of travel because the destination doesn't require the use of a personal vehicle.

2. Excursions in which rail is part of, or actually is, the attraction, and in which the transportation factor is absent.

In Ontario, the expansion potential for rail excursions of the second type is limited by location factors. It is also probably true that the market for such is also restricted. Probably, only one or two such attractions could be accommodated, and would have to be located in Southern Ontario in order to obtain the optimum market penetration. One such proposal, which is strongly supported by this Ministry, is for a steam engine, vintage railway tourist excursion in the Collingwood area of Georgian Bay. This attraction would use equipment already owned by the Ontario Rail Foundation.

In the sense that such excursions are primarily "attractions", it is relatively easy to approximate capital costs, attendance and revenues. The above example would likely require \$3-4 million in capital, attract in excess of 150,000 visitors (not all of whom would be "passengers") and likely pay its own way from fares and other revenues.

Successful examples of railways as attractions are the Cass Scenic Railway, West Virginia; the Strasburg RR, Pennsylvania; the Texas State RR and the Valley RR in Connecticut. Some

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of these involve significant capital investments on the part of state governments on the basis of their potential to generate tourist traffic. All are considered economic benefactors in their areas. All represent investments of several millions of dollars each. Attendance ranges between 65,000 and 130,000 visitors (or "passengers") per year.

Strasburg, the outstandingly successful railway among these (and a totally private operation) in fact pays dividends to its shareholders.

Where the railway represents a mode of travel to an attraction, in competition with other modes, the picture is much less clear.

In Ontario, the major attraction serviced by passenger rail is Toronto itself. Toronto has an integral transportation network which of itself obviates the requirement for a personal vehicle for short term visitors. Access from the train to the city is relatively convenient, with a direct connection to the subway system being afforded through Union Station.

Unfortunately, there are severe deficiencies in access to the city from other cities or markets:

1. There is no convenient trans-border train service between our U.S. markets and Toronto.

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2. There is a decided insufficiency of equipment in Southern Ontario to meet domestic and tourism demands.
3. Passenger rail scheduling appears to be a very low priority for both CP and CN.
4. Present equipment and infrastructure is such that rail travel is usually neither convenient (arrives or departs at wrong time), comfortable nor dependable.

While it is possible to travel from New York City, for instance, to Toronto by train, the trip takes 13 hours, to cover 540 miles - an average speed of some 40 miles per hour. This is hardly an attractive proposition for the tourist interested in a weekend in Toronto.

The traveller wishing to come to Toronto from the Detroit area, while being offered (by Canadian standards) excellent train service to Toronto from Windsor, must take a taxi from Detroit to the VIA station in Windsor because no direct passenger connection exists between Detroit and Windsor.

VIA and several private sector tour operators have had some success in selling weekend rail tours to Toronto out of Detroit and Montreal. However, equipment and scheduling problems limit the growth of such opportunities.

Much interest has been generated recently in the Collingwood

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area for a weekend "Ski Train" running out of Toronto to Blue Mountain. Such a service has the support of ski resort operators. However, we submit that the overall viability of such an operation is questionable.

Although the tracks are in place for a Toronto/Blue Mountain run, with the exception of the Toronto/Barrie portion they do not lend themselves to speedy service and as a result running time could be anywhere between 2 3/4 - 3 1/2 hours, not nearly as convenient for the skier as driving. Passengers using the train, would require public parking and its attendant expenses. The necessity of carrying boots, skis and poles on and off buses and subway trains (many passengers would have to use these modes) is not likely to appeal to many skiers. While subway service to Union Station appear to be a logical transportation choice, the subway does not commence running on Sunday mornings until 9:00 am. The train would leave at 8:00 am.

Rail in this case is also not as convenient at the slopes, with the exception of Georgian Peaks - however, no station facility exists there.

In our opinion such a service would need to become an "experience" in order to compete. This would entail greater costs and correspondingly higher fares. Of course, if this kind of service is determined to be socially or economically important, government may consider subsidizing the operation.

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Present VIA equipment is not really suitable for ski train excursions. Being steam heated it requires that steam be kept up while waiting to make the return trip. Failure to do so could result in the lines freezing and serious delay in getting the equipment moving again. (The lines tend to freeze even when operating). GO Rail equipment, (bi-levels with washrooms) is more suitable since it uses electric heating for each car which can be easily provided at almost any location. On the other hand, GO Rail equipment is not designed for longer-run comfort.

Another consideration not generally noted in the context of a proposal for ski train to Blue Mountain is the necessity to arrange to have a snowplow available between Barrie and Blue Mountain. (A consultant would be able to advise on the estimated number of occasions this might be necessary and the attendant costs).

One additional complication, as noted previously, is the complexity of VIA initiating a regular passenger service over the Barrie/Blue Mountain track since there was not a scheduled passenger service over that line in 1977.

A major analysis by a qualified consultant would be necessary to identify and accurately gauge the viability of passenger railway service. It is almost assured that such a report would be predicated on a recommendation for a service using GO equipment in off-peak hours or for a major capital investment for new equipment for VIA Rail.

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In the former instance the availability for new equipment could be a deciding factor in its feasibility. In the latter the cost of capital could well make the service decidedly uneconomical.

CONCLUSIONS

Train travel for the tourist is, as we have stated of two kinds - as transportation or as an attraction. In the former, equipment shortages and infrastructure deficiencies, operating mandates and costs likely impose severe restrictions on opportunities. As well, other modes of transportation offer better service in almost every respect. The introduction of the faster and more modern units into general service with VIA may solve some problems. However, we believe that it is unlikely that many of these trains will be operating exclusively in Ontario - in the near future.

Regarding the latter, market considerations restrict the opportunities.

Other conclusions:

1. Personal vehicles presently represent the most popular method of travel in Ontario, and are likely to remain so in the foreseeable future since they allow the traveller the most convenient and flexible access to a range of destinations not likely to be efficiently serviced by mass or public transit.

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2. The passenger rail system suffers from a shortage of passenger rail coaches and insufficient and (usually) inadequate infrastructure. Both present very real obstacles to increased rail travel, particularly by tourists.
3. Fast and efficient rail service between major centres may be useful in stimulating tourism, as part of the destination experience.
4. High quality intermodal facilities are required before rail can be seriously considered as a viable mode of travel for tourists.
5. Europeans, who represent a major tourism target market are predisposed to efficient rail travel and could be motivated to use similar services in Ontario.
6. GO Transit equipment seems to represent the best opportunity for Ontario to test market short to medium distance tourist package trips or excursions.
7. Certain specialized rail "excursions" can be important tourist attractions and significant travel generators in their own right.

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POSSIBLE RECREATIONAL/TOURISM TRAIN OPPORTUNITIES FOR INVESTIGATION1. Muskoka

<u>Toronto to:</u> Summer	Gravenhurst	-	boat cruise and "Seqwun
	Huntsville	-	boat cruise
		-	bus to Algonquin Park
		-	bus to boat cruise at Parry Sound
	North Bay	-	boat cruise
	Collingwood	-	Wasaga Beach
		-	boat cruise to Midland
		-	steam train to Meaford (ORA)

<u>Toronto to:</u> Winter	Huntsville	-	skiing
	North Bay	-	skiing
	Collingwood/ Georgian Peaks	-	skiing

<u>Equipment:</u>	Weekdays	-	RDC units from Barrie and Stouffville
	Weekends	-	GO Transit bi-levels

2. Niagara Falls

Using GO Transit with bus tours of Grimsby, Niagara-on-the-Lake. Also to Shaw Festival.

3. Stratford, London, Windsor, Sarnia

Adequately serviced by VIA (up to 14 trains daily). Could supplement to Brantford, Kitchener, London, etc. on weekends

- 15 -

with GO equipment. Special excursion to Stratford Festival.

4. Kingston, Gananoque, Brockville

Adequately served by VIA. Possibility of GO Transit to Upper Canada Village on weekends, but rather long trip.

5. Peterborough/Kawarthas

Undeveloped to now, but could utilize GO Transit daily to Peterborough. Potential to lift locks, petroglyphs, serpent mounds, boat cruises, etc.

6. Ottawa

Weekend excursions using GO equipment to see; the Parliament Buildings, Parliament, Changing of the Guard (summer), National Museum of Science and Technology, Canadian War Museum, National Arts Centre, etc. The "suburban" location of the station is a distinct disadvantage for excursionists. A bus service to downtown would have to be put in place for the convenience of passengers.

7. Northern Ontario

Development of Minaki Lodge (2½-3 hours) from Winnipeg, plus many fishing camps en route Sioux Lookout, may have potential.

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8. Northern Ontario (Wilderness)

Wilderness areas for visitors from U.S. and Europe. Can develop camping coach concept to provide accommodation at various points (CN route Capreol - Winnipeg for instance or Algonquin Park).

9. Northern Ontario

Several attractions which suggest circle tour possibilities, i.e.:

- Kirkland Lake/Timmins mining area
- "Polar Bear Express" to Moosonee
- Algoma Central "Agawa Canyon

Excellent train service Toronto/Timmins/Kapuskasing, but no link to "Polar Bear". TEE trains a real plus, but no connection to Lake Nipissing cruise.

Very important rail link missing between Sudbury/Sault Ste. Marie. Successful service in this area requires direct rail link to Toronto.

10. Auto-With-You

In the longer term, combined passenger-automobile trains.

APPENDIX 'A'

TASK:

- Potential Rail Opportunities in Recreation and Tourism.

PURPOSE:

- To assess the potential for rail to successfully provide more tourist/recreational excursions in Ontario. To assess the benefits of this type of program to the Province.

OUTPUT REQUIRED:

- A description of past and present tourist/recreational train excursions in Ontario with additional significant examples from the rest of Canada and the U.S.A.
- Outline the nature of the service (origin-destination points, special features, etc.) when it is operated, ridership, peaking (seasonality), type of clientele, fares, profitability, socio-economic benefits to the area served etc.
- Tourist/recreational trains can be run as "linear experience" excursions or as "destination" excursions or a combination of both. Compile a listing of the potential opportunities in Ontario for these types of services identifying probable costs, patronage and local benefits.

- 2 -

- Outline a program by which the Province might use rail services to develop tourist and recreational potential. Assess the costs and aggregate benefits (or otherwise) to the Province of such a program.

DEADLINE:

- 6 weeks.

ASSIGNED TO:

- Ministry of Industry and Tourism

RESOURCE-BASED INDUSTRY AND THE RAILWAYSAUGUST, 1980INTRODUCTION

This is the second input by the Ministry of Natural Resources to the Ontario Task Force on Provincial Railway Policy. It deals with possibilities for new or renewed resource development, and how railways, alone or along with other modes, might serve or fail to serve that development. New development may include hitherto undeveloped areas, intensification in areas already developed, or both.

Discussing railways in relation to development in forestry, mining and outdoor recreation is largely speculative. Areas for potential development of tourism can be identified. Whether the tourist will choose public transport will depend on his attitude and understanding, the kind of experience he seeks, and the nature and quality of transport both to and within his chosen holiday area. Areas for potential development in the forest and mining industry can be pointed out. But decisions to develop lie largely with the industry. Such decisions may be strongly influenced by whether or not reliable transportation is there at reasonable cost to satisfy the industry's needs. Numerous otherwise promising areas may remain undeveloped for lack of prospect of good transportation, whereas those on a rail line will be developed, such as Onakawana and Cochrane Enterprises, so long as service and rates are competitive.

STUDIES RELATING TO RESOURCE POTENTIAL

There are numerous studies related to potential resource development in MNR. They come at a variety of scales and levels of detail.

Examples are:

- Mineral Policy Background Papers
- Geology Maps (bedrock and surficial)
- Mineral Aggregate Studies
- Mineral Resource Potential
- Forest Inventory

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- Forest Management Plans
- The Ministry's developing land use plans
- Increasingly sophisticated base maps
- Increasing capability of MNR to provide remote sensing interpretation
- Ontario and Canada Land Inventory, showing land capability for forestry, recreation, wildlife and other uses.

Wherever relevant these sources are reflected in this input. For some there is a choice of levels of detail, and the most general has been chosen. More detailed information can be supplied later should the need arise.

The Ministry encourages full use of these and other sources of information wherever they help the user. But it would caution against extensive interpretation of those sources without consultation with appropriate Ministry staff. Whenever such consultation is desired, the Land Use Co-ordination Branch of MNR can direct the user to appropriate MNR staff.

AREAS OF POTENTIAL OR ACTUAL NEW DEVELOPMENT OR REDEVELOPMENT

1. Forest Industry

Expansion will be largely a northward extension of the forest areas under licence. It could also include intensified production in Southern Ontario and elsewhere. The new areas are largely north of the more northerly CN line across Northern Ontario.

1. Cochrane Enterprises Ltd., a subsidiary of Normick Perron Inc., north of Cochrane along the Ontario Northland Railway line. Wood is now being harvested and goes to the veneer and plywood mill in Cochrane by unit train on the ONR line.
2. Kimberly-Clark of Canada Ltd., northeast of Lake Nipigon. This wood goes initially to Langlac, by truck, for central processing. Kimberly-Clark sorts out sawlogs for its saw-mill there and sells veneer logs to Weldwood of Canada Ltd., which has a veneer and plywood mill and a particleboard plant in Longlac. Pulpwood is then slashed and water-hauled down Long Lake to the Terrace Bay pulp mill.

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3. Great Lakes Forest Products Ltd., tract under agreement north-east of Red Lake, and extending eastward to north of Lake St. Joseph. Should a licence be issued, the wood would go to a new pulp mill site, largely by truck, unless the CNR line is linked to the CPR main line.
4. Great Lakes Forest Products Ltd., licence north of Lac Seul. The wood goes, largely by truck, to the Dryden pulp and paper mill.
5. Great Lakes Forest Products Ltd., licence north of Savant Lake. The wood goes to the Great Lakes pulp and paper mill in Thunder Bay; some sawlogs are diverted to the Great West Timber Ltd. sawmill, also in Thunder Bay.
6. McKenzie Forest Products Inc., north of Sioux Lookout. The wood goes to the community of Hudson, largely by truck. Note the especially difficult terrain in this area.
7. Boise Cascade Canada Ltd., north of Kenora. The wood goes to the Kenora pulp and paper mill and sawmill.
8. Domtar Packaging Ltd., northwest of Lake Nipigon. The wood goes to the pulp and paper mill in Red Rock by truck and water.
9. Spruce Falls Power and Paper Co. Ltd., north of Kapuskasing. This wood goes to the pulp and paper mill and sawmill in Kapuskasing by truck, or occasionally by rail along the SFP&P Co. railway.
10. Abitibi-Price Inc., north of Smooth Rock Falls. This wood goes to the pulp and paper mill and sawmill in Smooth Rock Falls by truck.
11. The Ontario Paper Co. Ltd., north of Cochrane. This wood goes to the pulp and paper mill in Thorold, Ontario, in the Niagara Peninsula, by rail. This is one of the world's longest rail hauls of roundwood.

12. Abitibi-Price Inc., northeast of Iroquois Falls to the Ontario-Quebec boundary. This wood is trucked to the Iroquois Falls pulp and paper mill.
13. Numerous smaller, shorter term, Crown timber licences are issued to various forest products industry enterprises along the north line of the CNR, a major concentration occurring in the Hearst vicinity.

Forested Crown lands are covered by the Ministry's Forest Resources Inventory by computer ledgers and by maps, most at 1 inch = 4 miles scale, with some recent work at 1:10,000. Companies having licences are required under The Crown Timber Act to file approved management plans indicating where logging and forest management are to be done.

The mineral resources industry uses railways extensively for bulk transportation. Shipment of minerals and mineral products accounts for half of the revenue traffic of Canadian railways and inland waterways. Examples include: unit trains from Kirkland Lake and from Temagami to Hamilton; unit trains to ship sulphuric acid from sulphide mines to market. Texasgulf, near Timmins, has built and operates a rail line from its mine to its concentrator.

2. Mining, other than Mineral Aggregate

Many promising areas are as yet undeveloped. Maps showing relative levels of potential for economic mineral extraction have been prepared for much of Ontario. Those maps show as well the nature of the mineral deposit. Areas of sand and gravel are shown separately on these maps.¹ Developed mineral areas, and other areas holding potential for development in the foreseeable future include:

1. The Red Lake area: the country's richest gold mine is here
- 2.3 The Favourable Lake - North Spirit Lake area

1. Many of the areas described in this input may be found on maps available in MNR.

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- 4.5 Lake St. Joseph - Pickle Lake area
6. Moose River Basin - including Onakawana
7. Cargill - Opatatika area
8. Detour Lakes area.

These are in addition to well-known mining areas such as Sudbury, Kirkland Lake, Timmins, Cobalt and others, each of which has potential for further discovery.

Some of these areas are served by rail, for example Onakawana. But some, like Favourable Lake-North Spirit Lake and Detour Lakes, are a considerable distance from any railway. It seems most unlikely that a railway would be built to serve these.

In the case of Detour Lakes, alternative transportation modes have been considered. A road seems the most likely choice.

3. Mineral Aggregate

Areas of significant potential for mineral aggregate have been mapped in very general terms for much of Ontario. Detailed maps have also been prepared for most aggregate-rich areas.

MNR quite recently took part in a "rail rationalization" study led by MTC. It considered aggregate resource concentrations in the south part of Grey and Bruce Counties, and the transportation needs for moving material from this source to market. This study illustrates the kind of study that could be made for aggregate or any other resource elsewhere. It also illustrates two points:

- 1) the need to preserve existing railway rights-of-way between resource-rich areas and market;
- 2) the need to consult MNR (among others) before a decision is made to abandon a line.

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An MNR study is nearing completion which examines bulk transport of aggregate to the Toronto-London-Sarnia-Windsor market from two sources: South Grey and Bruce, and Manitoulin Island. The study considers several means of transport including road, rail, ship and pipeline, and finds definite advantages for:

- ship transport from Manitoulin to the Windsor area
- highly developed rail transport from Grey - Bruce to the Toronto area.

4. Outdoor Recreation

The main opportunities to provide railway service to recreation areas are largely in Southern Ontario, where large numbers of people could be moved from urban centres to concentrated destinations.

There are a number of Provincial Parks in Southern Ontario (operated by MNR) as well as Conservation Areas (operated by the Province's 39 Conservation Authorities), the parks of the St. Lawrence, Niagara and St. Clair Parks Commissions, and three National Parks.

There may be possibilities of serving some of these by rail, for example near urban parks like Darlington and Bronte Creek, and wilderness areas such as parts of Algonquin, Missinaibi and Polar Bear (rail and air) Parks.

There are areas whose combined natural, cultural, historic and other attributes and to some extent closeness to centres of population give them potential for tourism development. Seventeen such areas were identified in a 1976 study for the Ministry of Industry and Tourism.¹ That report also shows how these 17 areas might expand over the next few decades, and identifies touring corridors connecting them. The prospects of serving those areas effectively by rail, alone or integrated with other modes, depend on:

1. "Tourism Development in Ontario: A Framework for Opportunity." Prepared for Ontario Ministry of Industry and Tourism by Balmer, Crapo and Associates, Waterloo, 1976.

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- 1) whether there is an existing line, or a route that could be rebuilt;
- 2) convenient scheduling and competitive fare structures;
- 3) comfortable, convenient equipment;
- 4) assurance of suitable transport for the vacationer once in the area (perhaps the equivalent of the travel industry's fly-drive packages, where one's destination is reached by public carrier and then the means of travel within the destination area is provided).

These and other aspects of tourist transportation are discussed in a Ryerson Institute undergraduate thesis using Algonquin Park as an example.¹

5. Staff Travel

Some MNR field offices have pointed out that staff often travel by train wherever schedules, quality of service, comfort, convenience and so on, allow them to do so efficiently.

RAILWAYS IN ONTARIO

MNR staff familiar with both resource industries and railways in Ontario believe that certain features of those railways limit their usefulness to the industry. One is that routes are taken (around natural obstacles) and lines laid (rails spiked to wooden ties) in a way that makes fast, safe, efficient movement of trains impossible. The same MNR staff feel that the railways' safety standards leave room for improvement.

There is a trend for the railways to limit their operation to hauling, and leave the customers to provide their own cars or unit trains, and even build their own branch lines. So the resource industry is forced into the transportation business, and this may cause a trend toward trucking. It has also given rise to "transportation brokers" who contract

1. Bee G. Kathleen: "Alternative Transportation to Recreation Areas - Algonquin Park." Undergraduate thesis, Ryerson, May 1980.

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to provide the various aspects of transportation service the railways have abandoned. While this is happening, the railways, instead of using their resources to improve their service, are diversifying into other kinds of business.

For these and other reasons, rail service does not contribute as it might to keeping Ontario's industries competitive. In this respect railways are very different from some found, say, in Europe or Japan.

Matters might be improved if current engineering and other technical skills could be used to realign and modernize rail lines and if fast, safe, comprehensive and efficient service could be provided. Also, there may be considerable potential for increased use of container and piggyback service.

TRANSPORTATION NEEDS

Consensus in MNR would seem to indicate the railways' most useful applications to be in areas where there is:

- a) high volume of traffic between a concentrated source and a single, or concentrated destination. It may not work so well when the resource is scattered over a large area, or when frequent trips into the area (e.g. for forest management or protection) are needed;
- b) nearness to an existing line (since new lines are much more costly to build than roads, and more exacting as to location requirements);
- c) a good location for a route, if one needs to be built. Two points arise from this: (i) abandoned routes should remain intact if there is any chance of their being need in future; (ii) the choice of route is much more restricted than one for a road regarding terrain, curves, grades, etc.
- d) effectively meeting the need for moving passengers and freight without conflict.

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In the forest industry, the presence of a rail line, even one completely operated by the industry, does not guarantee its use for moving wood.

Examples are:

1. The rail line to Smoky Falls, owned by Spruce Falls Paper, now sees limited use.
2. A line out of Iroquois Falls, owned by Abitibi, was torn up and the roadbed is now used as a truck road.
3. In the more distant past, there were numerous logging railways in the Upper Ottawa Valley and elsewhere in Southern Ontario. They contributed significantly to the opening up of the region, but were quickly abandoned with the advent of more versatile roads and trucks. The roadbeds in many instances are now used for roads or recreation trails.

On the other hand, MNR's earlier input gave examples of effective use of existing railways by the forest industry. Another example is that of Cochrane Enterprises, which moves wood from its operations to Cochrane by unit train. Also, the existing rail line into Thunder Bay from the northwest is used very heavily by Great Lakes Forest Products for the movement of wood.

At one time railways served the forest industry quite extensively; some were owned by the industry. Railways and rivers (for driving of logs) formed the main means of transporting wood, until after World War II when these gave way to trucking.

The above comments relate largely to the movement of wood from the woods to the mill, or from one mill to another. For moving forest products like pulp and paper from the mill to the market railways are heavily used. Railway and road haul are both used to move lumber and veneer.

That railway service does not always meet the mining industry's need is illustrated by the following:

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1. It is more economical to transport phosphate by ship from Florida to Southwestern Ontario than to move it by rail from the Cargill source in Northeastern Ontario.
2. It is cheaper to ship Alberta coal to Eastern Canada by rail to the west coast, then by ship through the Panama Canal, than by rail across Canada.
3. The advertisement quoted below appeared in a Thunder Bay newspaper in June 1980. Note that the ore is to be moved by truck, for a distance of roughly 1,000 km, even though both ends of that haul are close to the northern CN line.¹

BRANCH LINES, ABANDONED LINES, ETC.

The Task Force has identified existing lines on its map. It has asked about branch lines which might be considered for abandonment.² It might be useful for the Task Force to:

1. establish a list and map of lines where service has been discontinued, or such a move is considered;
2. Establish that in each instance the line, or at least the right of way, remain intact unless this Ministry (as well as other interested parties), given suitable opportunity, determines that the public interest does not require the line's retention. This would represent a continuation or expansion of the present practice of MTC, in its Rail Rationalization program, to consult with MNR about any upcoming abandonment. MNR should be consulted in relation to its overall area of interest.

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1. The advertisement reads in part as follows: "LONG DISTANCE TRUCKERS: Tender will be requested in the near future leading to a contract to haul gold ore from the Leitch property near Beardmore, Ont., to Lamaque Gold Mining Co. Ltd. near Val d'Or, Quebec. Haulage is scheduled to commence in mid-July and continue for four months, with a minimum rate of 500 tons per day."
 2. In this input, there are considered to be several stages or levels of abandonment, including: discontinuation of train service, removal of tracks, disposal of right-of-way property.

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When rail lines are to be abandoned, it is most important for the line, or failing that the roadbed, or failing that the right-of-way, to remain intact because:

- 1) it is there in case it is needed in future to serve resource areas;
- 2) meanwhile the roadbed can be used as a truck road, a right-of-way for a power line, pipeline or something else; and
- 3) so long as they are not likely to be needed by the resource-based industries, abandoned rail lines can make excellent linear recreation routes, e.g. for trails, snowmobiling, roads to recreation, etc.

Preserving such lines for possible future use would help minimize:

- a) the high real estate prices of acquiring a right-of-way, and possibly disrupting adjacent property in the process;
- b) need for the type of public hearings that have become common in recent years, and to resolve the many problems that come to light in such hearings.

REBUILDING OF EXISTING LINES

The Ministry's mineral aggregate staff have observed that existing lines are often not adequate to withstand use by heavy gravel trains. Heavy rails, strong roadbeds, and strong bridges must be included in the rebuilding of a line if it is to withstand constant use of heavy-weight gravel trains.

RESOURCE ACCESS ROADS

The following will illustrate how important roads have become for forest access since World War II. Prior to that time, rail and water were the main means of access and transport.

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A very large part of Ontario's productive forest is now served by access roads. MNR owns and operates 5,600 miles of road, and the forest industry owns another 8,000 miles on Crown land. These two figures together almost equal the total mileage of roads in the provincial highway system.

MNR is involved in two programs which will expand this mileage. First, companies entering into a new arrangement called a forest management agreement will be subsidized for the building and upkeep of access roads. Second, under an agreement with the Federal government, funding is available for an estimated 1,000 miles of additional roads to be built over the next five years.

It appears that in all but the most difficult terrain, a cost of \$40,000 to \$50,000 per mile is realistic for primary roads; much less for secondary roads. These costs are for construction, and do not include upkeep. Both figures may increase significantly in regions having difficult terrain.

STUDIES BY MNR RELEVANT TO RAILWAY BUILDING

One MNR study will be useful should railway building be seriously considered. The Engineering Geology and Terrain studies done for much of Northern Ontario (NOEGTS) should assist in identifying features of terrain that must be considered when laying out a railway, a road or any other transportation feature - such features as topography, rock type, depth of overburden, organic soils, etc.

Some years ago MNR took part in regional development studies in Northern Ontario. These examined possible locations of resource processing plants, providing electric transmission to such sites, and a number of modes of transporting partly processed materials, such as pipelines, railways and truck roads.

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OTHER STUDIES

The Task Force may be interested in an economic study for Northern Ontario which addresses transportation and other matters, and was submitted to The Royal Commission on the Northern Environment on December 21, 1979. A. E. Daley of the Commission could be contacted for more information.¹

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1. The Laurentian University study was submitted to R.C.N.E. by: R. V. Segsworth, Project Co-ordinator; H. Strauss, Principal Researcher, Economics; O. Djamgouz, Research Supervisor, Mining Engineering; A. Farah, Principal Researcher, Engineering; P. Umar, Principal Researcher, Geostatistics (Dames and Moore).

ONTARIO IN THE 80's
Major Developments, Issues and Trends

Ministry of Treasury and Economics
July 1980

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ONTARIO IN THE 80's

Introduction

This paper attempts to highlight several of the key factors affecting major development in the Province of Ontario. It is neither comprehensive nor intended to be. It does however provide insights into some of the economic and spatial factors which may, by implication, have some impact on the future of rail transport in Ontario.

The paper begins with an economic overview and a review of some of the programs the Government of Ontario has used to maintain the vitality of the economy.

A brief review of several major sectors of the economy is then undertaken. The sectoral reviews are not meant to be comprehensive descriptions of the past performance and future prospects of each industry. They merely discuss some current trends and issues that the Task Force may find useful in its deliberations. More detailed information on each sector is readily available from other ministries of the Ontario Government and existing published reports.

The selection of the topics and sectors covered was limited to those that, in consultation with Task Force staff, were felt to be of greatest potential help to the Task Force in its deliberations.

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I. ECONOMIC OVERVIEW

Ontario, like other industrial jurisdictions, has faced a series of major economic changes through the 70's. The OPEC oil issue, the results of the GATT trade negotiations, the battle with inflation and the current auto industry difficulties have presented the Ontario economy with more than its share of challenges. In spite of these major challenges, Ontario has fared remarkably well throughout the past decade. During the 1970's Ontario's real output grew at an average rate of 3.7 per cent. This performance out-paced that of West Germany, the U.S., the U.K. and the combined total of the OECD countries.*

Recent forecasts released by OECD and the International Monetary Fund suggest that, over the short term, the Canadian economy will be showing very little new growth. Over the longer term throughout the 80's, a modest recovery is expected in Canada and by implication in Ontario.

Forecasting economic performance for the Province of Ontario, or any of its industrial sectors, is certainly a difficult task and beyond the scope of this paper.** Below, however, several key factors that will condition Ontario's performance in the 1980's are listed.

Key Issues for Development in the 1980's

- . Ontario has the resources, skilled labour force, proximity and access to huge markets in the U.S., and the financial strength to develop on a broad front of activities.
- . As population growth slows in the 1980's, economic growth will be sustained by higher productivity growth rates.

* More details of the performance of the Ontario economy are included as Appendix A: An address by the Honourable Frank Miller, Treasurer of Ontario, May 15, 1980 before leading businessmen in London, England.

** Numerous analyses of the Ontario economy have been produced by various agencies. The Ontario Economic Council and the Federal Department of Regional Economic Expansion have both published such studies in the past two years.

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- The major emphasis will be on investment in the private sector as an important stimulus to productivity growth. The public sector is no longer absorbing a large part of the highly educated labour force.
- The population mix will change, with more prime-aged workers leading to higher productivity and greater entrepreneurial initiative.
- Higher wage costs will be a strong stimulus to greater productivity in the service sector (e.g., in financial and trade sectors) and will induce a greater use of capital and new technology (e.g. computer chip and micro-electronic technology).
- A major emphasis will be on training and education to develop greater skills in the trades, in marketing and business, and in technology. All three are essential to balanced development.
- Ontario industry is currently highly competitive in terms of labour costs.
- The rapid expansion of the energy sector in Western Canada provides huge opportunities for import replacement by Ontario businesses.
- The automotive industry, although currently facing major difficulties, is involved in a massive retooling which, by late 1981 or early 1982, should make it highly competitive in producing small energy-efficient products.

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II. KEEPING ONTARIO COMPETITIVE

The Provincial Government has various tools and resources available to it to encourage economic growth in the Province. Over time it has applied these tools in a judicious manner to achieve economic goals required by the circumstances of the period. To do this the Province has maintained a flexible fiscal policy. Over the last several years the Province has shifted from heavy emphasis on major capital expenditures to provide the infrastructure, health and educational facilities needed for a growing population and economy, to a policy of expenditure restraint and reduced growth in the government sector. This restraint has allowed maximum opportunity for private sector growth and for the reallocation of Provincial efforts into employment creation activities. While the overall direction of Provincial policy is geared to improving Ontario's competitive position, there are also some specific initiatives that warrant mention.

Current Provincial efforts are directed at assisting essential industries in their attempts to meet the challenges of the 80's. The Employment Development Fund, announced in the 1979 Budget, is a major stimulative program designed to assist key industries and sectors in Ontario, by providing financial assistance as a catalyst in attracting new capital investment. To date over \$2 billion of private investment has been levered as a result of the Fund. In particular, the pulp and paper industry has been assisted in its \$1.2 billion modernization program needed to maintain the industry in a competitive world market.

The Fund has also provided major assistance to the automotive industry in its efforts to retool and modernize. Assistance also has been provided to many other key sectors of the Ontario economy.

New industry or industries wishing to expand have been assisted by the Fund or through the Ontario Development Corporations' programs.

The Small Business Development Corporations (SBDC) program, also announced in the 1979 Budget, is designed to encourage the flow of capital into new small business ventures.

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Also as a part of the Employment Development Fund a special program has been developed for the tourism sector called the Tourism Redevelopment Incentive Program (TRIP). It provides assistance to tourist operators to improve and enlarge new tourist facilities.

In the resource industries, the Province has provided special tax incentives and also has worked with the Federal Department of Regional Economic Expansion in providing special assistance to the important mining and forestry industries in Ontario.

III. SELECTED SECTORS

Introduction

Because of their association with rail transport, several specific sectors of the economy are reviewed below. The sectors were selected partly on the basis of what was felt to be significant to rail transport and partly on the basis of available expertise. Resource extraction and processing often involves the movement of bulky goods as do several components of manufacturing. The tourist industry is reviewed as it involves the movement of people and may become increasingly linked with rail as energy costs increase.

A major component of the Ontario economy, the growing service sector, is not discussed because of its limited significance to rail transport. Lastly, the agricultural component of the economy is omitted, since most of the agricultural issues that relate to rail have to do with products originating outside Ontario.

A. NATURAL RESOURCES AND PROCESSING

I. Mining

General

Mining continues to play an important role in the economies of most northern Ontario communities, and in the economy of Ontario. Moreover, mineral exports contribute very significantly to the Canadian balance of payments. Traditionally metal mines have played a most important role in the development of Northern Ontario - Sudbury for nickel and copper mining, Elliot Lake for uranium, and Red Lake and Timmins for gold. Lately, non-metallic minerals are gaining recognition and a new rush to industrial mineral development may be on the way.

Mining activity traditionally responds to changes in investment decisions in the general industrial and manufacturing sectors. But certain recent

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international events have added an element of speculation to many mineral commodities. OPEC is increasing the price of oil and this spiral of rising prices is having its impact on auto production which in turn influences other non-fuel mineral production. Political instability in several sections of the world and various international monetary events have increased the demand for both silver and gold.

In general, metal mining is now going through a phase of record performance in spite of rising uncertainties such as the downsizing of automobiles, seabed mining, the future of nuclear power and increasing competition from foreign countries. In spite of these unanswered questions, the mining sector in Ontario appears to face a period of strong performance in the near term.

Uptums

- Almost all gold mining operations are undergoing expansion, and many past producers and other deposits considered submarginal only a year ago are being re-examined vigorously for eventual opening. The Detour Lake area in Northeastern Ontario is expected to have one of the largest gold mining operations in North America. Goldlund Mine is expected to open a major gold mine some 55 km northeast of Dryden.
- All the base metals produced in Ontario, i.e., copper, nickel, lead and zinc, moved by speculation over international political instability, reached record high prices during the past few months. Lately, there has been some softening in prices, but the price levels are still adequate to encourage production.
- Uranium mine expansion programs in the Elliot Lake area are advancing well on schedule with one notable exception of Kerr Addison's Agnew Lake Joint Venture. In the Haliburton area, Rare Earth Resources, backed by Esso and Dickenson, is accelerating its exploration and development programs. If successful, this area may have a new uranium venture.

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- At such time as demand increases there are major iron ore deposits of significant potential at Lake St. Joseph and Bending Lake in northwestern Ontario.
- Two non-metallic mining ventures are expected to benefit the communities of Kapuskasing, and Midlothian Township of Northeastern Ontario. Phosphate and asbestos may be mined at Kapuskasing and in the Midlothian area respectively. The Kapuskasing project will have an added benefit in creating new demand for excess sulphuric acid produced by Texasgulf and Inco in Timmins and Sudbury - with significant transportation implications.
- Various Canadian companies and a foreign firm are exploring for silver in the Cobalt area. Many firms are examining old tailings for their high silver content.
- The Royal Commission on Electric Power Planning, on March 26, 1980, recommended that the lignite deposits at Onakawana, south of Moosonee, be developed and an 800 to 1,000 mw power station be built. Estimates indicate that the lignite deposits could generate 1,000 mw of electric power for 30 years.
- With relaxation of the Ontario Securities Commission regulations and provincial budget incentives, junior mining has again begun to raise funds for exploration and development in Ontario.

Downturns

- The iron ore sector has declined significantly in recent years. The mines at Atikokan (Steep Rock and Caland) closed their operations as was expected and smaller operations at Capreol and Marmora have also ceased within the last two years. The latest closure has been the iron ore recovery plant in Sudbury which transferred 120 employees to other operations of the company.
- At Agnew Lake, Kerr Addison's uranium joint venture is in the process of closing due to the unexpected extraordinarily low recovery of uranium.

2. Forestry

The forestry sector represents between 6 and 8 per cent of total manufacturing activity in Ontario (as measured by employment, shipments, and value added). Although this share is lower than in other parts of Canada, this is more a reflection of the size of other industrial sectors than of the absolute size of Ontario's forest industry. The Ontario industry includes large and well established pulp, newsprint and other paper and board industries, and a sizable lumber industry. The forest industry along with mineral processing provides virtually the sole industrial base and manufacturing presence in the northern part of the Province.

The industry has fundamental strengths including experienced personnel, a strong technological base, world-scale facilities in major product areas, a developed timber resource, advanced levels of integration and established marketing organizations and distribution networks. The successful development of export markets for bulk-commodity forest products has subjected the producing sectors to the discipline of international competition, thereby contributing to economies of scale and high levels of specialization.*

Prospects

The future of Ontario's forest products industry depends to a considerable degree on growth in domestic and foreign markets, particularly the United States, where products are sold in large volumes. Some 50 per cent of Ontario's production is exported, and most of this is exported to the United States. Demand for forest products traditionally relates to both economic growth in the longer term and economic cycles in the shorter term.

Ontario's pulp and paper industry is currently in the midst of an extensive modernization of its facilities. As part of this modernization, it is estimated that overall production capacity will increase by some 10 to 15 per cent over the next five years. Over the longer term, because of emerging wood supply constraints, production increases will be much more modest.

* For further background, see Government of Canada, Industry, Trade and Commerce, "Review of the Canadian Forest Products Industry", November 1978.

Transportation

Transportation costs are a significant element in Ontario forest products operations, both from the standpoint of procuring wood supplies, and delivering finished products to markets. Transport costs will continue to increase along with the other costs of doing business but at an accelerated rate because of the heavy dependence on fossil fuel. On the other hand, because of its size, the forest industry generally maintains a good negotiating position with all carriers and has traditionally provided itself with a fair degree of expertise in traffic management.

The industry faces the recurring and expensive problem of shortages of railway equipment but, again, because of the heavy tonnages at its disposal, it is in a position both to demand the best transport service that is available and to consider with the carriers ways and means of enhancing the supply of rolling stock.

From the forest to the mills in Ontario, most of roundwood for pulp and timber for lumber moves by truck, with the exception of deliveries to pulp mills in Thunder Bay, Ft. Francis and Thorold, where distance dictates the use of rail as well. There is not likely to be much change in this situation in the near term.

Finished product shipments tend to use water and/or rail because the majority of products are bound for more distant markets. In Southern Ontario, however, trucks are also used to serve the closer markets.

3. Steel

The record of Ontario's steel producers is indeed an outstanding one, particularly when contrasted with that of American and European competitors, and provides striking proof that Ontario companies can attain world-class levels of efficiency and technology without overbuilding capacity.

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Capital spending by the three major companies in 1979 amounted to \$365 million and each of the companies has announced major investment programs for the next 3 to 5 years.

- Stelco will complete a hot rolling mill at Nanticoke by 1984. The June 1980 opening of the Nanticoke plant added slightly more than 1 million tons to annual steel production capacity which was previously approximately 6 million tons.
- Dofasco will add a \$450 million hot strip mill to its Hamilton complex by 1983, which is designed to increase the company's annual output from 3.7 to 4.5 million tons.
- Algoma (Sault Ste. Marie) will complete a new \$120 million coke oven battery by 1983.

Ontario's three major steel producers, in total, increased steel production in 1979 to 13.4 million tons, an increase of 10 percent over record 1978 levels.

The vulnerability of the Ontario steel producers to a U.S. recession has been heightened by the high level of exports in the recent boom. This is disguised in the official steel statistics which show as exports only steel shipped directly to foreign (mainly U.S.) buyers. A considerable amount of steel, however, is being exported by secondary manufacturers, warehouses and fabricators. With the cheap Canadian dollar, exports of auto parts increased significantly in 1978. Steel sold to these manufacturers appears as domestic consumption.

One source close to the steel industry estimates that as much as 35 per cent of Canadian steel production in 1978 was ultimately destined for export. If this is true, the recent boom is based on exports which, in the current U.S. recession, could dry up rapidly.

Outlook

- The continuing shrinkage in capacity of the U.S. industry raises the possibility that when the current economic slowdown is over, U.S. industry may find itself even less able to meet domestic demand than it is at present. With the new capacity coming on stream in Ontario during the next three to four years, the Province's industry could be in a strong position to expand significantly export sales.
- The Ontario steel industry is relying on the many large energy projects planned for Canada in the 1980's to compensate for the downsizing of automobiles and the slowed growth in other sectors of the economy.
- Due to the auto industry's problems and the slow North American economy, 1980 is expected to be a somewhat slower year than 1979.
- However, beyond the immediate term, the industry looks extremely healthy. Its high degree of efficiency should enable it to profit from likely opportunities in the U.S., while energy developments are expected to ensure strong domestic demand.

4. Petro Chemicals

Petrochemicals are derived from crude oil and natural gas. The products include the primary petrochemicals such as ethylene, propylene and benzene, along with the derivatives of the primary petrochemicals: (i) plastic resins (e.g., polyethylene), (ii) synthetic rubber and latex, and (iii) industrial petrochemicals (e.g., styrene). (Plastic products (e.g., plastic piping), rubber products (e.g., tires), and formulated products (e.g., detergents) are not considered to be petrochemicals.)

The petrochemical industry has been called the "invisible industry" because its products are not familiar to the public. Nevertheless,

petrochemicals are everywhere. A study by the Ontario Economic Council demonstrated that steel and industrial chemicals are the two most pervasive industrial products.

Primary petrochemicals are produced in Ontario primarily by Petrosar in Sarnia. Its heavy liquid feedstock arrives by pipeline from western Canada, and there is little flexibility to process other feedstocks. Petrosar's products are transported in bulk by rail, truck, marine, and pipeline, mainly within the eastern half of North America. Four of Petrosar's customers located in the Sarnia area, Dupont, Polysar, Shell, and Union Carbide, are supplied by pipeline because of their proximity. Petrosar has over 300 tank cars in its rail fleet. Petrosar also sells off much of the residue of its chemical manufacture in the form of oil for use in industrial and domestic heating.

The following excerpts from Petrosar's 1979 Annual Report provide a short summary of current and expected conditions:

"Given a relatively advantageous energy supply position, the Canadian petrochemical industry is in a favourable position to experience a period of very rapid growth in the 1980's.

Crude oil supply is of critical importance to Canadian refiners and crude oil-based primary petrochemical producers. This matter is expected to have a high profile in the 1980's. An appropriate means of acquiring crude oil for Eastern Canada refiners must be found in order that Canadians can be provided with time to adapt their manufacturing operations and energy consumption patterns without major industrial disruptions.

During most of 1979, feedstocks for Ontario refineries and petrochemical plants were under allocation and Petrosar was forced to make some production cutbacks due to inadequate supplies."

Short- and longer-term prospects for both the primary and derivative petrochemical industries in Ontario will be tied very closely to the manufacturing cycle in eastern Canada and the northeast United States.

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The Ontario primary petrochemical industry will remain concentrated in Sarnia for the foreseeable future. Petrochemical investment in other areas is considered by the federal government to be undesirable since it would, for example, (i) require development of infrastructure already available in existing sites, (ii) lead to over capacity and (iii) prevent existing complexes from achieving greater efficiencies.

B. MANUFACTURING

Introduction

Manufacturing has in the past provided a large part of Ontario's employment, gross provincial product and rail traffic. Much of the manufacturing sector was established to serve the domestic Canadian market as small Canadian-owned or as branch plant operations behind protective tariff walls. As tariff protection diminishes and more and more goods are manufactured in relatively low-wage countries, some Ontario manufacturing industries will be required to undergo substantial rationalization and adjustment.

There is full awareness of the continued threat to the Canadian and Ontario manufacturing economy. There is now a host of government programs to assist in developing and applying new technology, to provide capital, to retrain labour, to attract industry, to support world product mandating for branch plants and exporting in general, to buy back viable branch plants, and to obtain spin-offs from defence contracts. All conceivable measures are being employed to ensure that the manufacturing sector will remain strong.

In the short term, Ontario manufacturing is faced with the combined effects of:

- a downturn in demand caused by the U.S. and Canadian recession;
- the difficulties of the North American auto industry in adjusting to energy and pollution requirements;
- the effect of a drought-created downturn in western agriculture incomes.

Over the medium term, Ontario manufacturing must continue to make structural changes. On the positive side, Canada and Ontario have much in their favour in this battle: Ontario's labour package is now very competitive

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with other industrial nations; it has an edge on energy availability and cost over other major industrial nations; it has a highly skilled labour force with government support for retraining where necessary; and business, government and labour are aware of the problems, and for the most part are committed to overcoming the difficulties.

I. The Auto Industry

The Canadian auto industry consists of three distinct sectors: autos, trucks, and parts and accessories. The determinants of demand in each sector are, for the most part, quite unique.

- U.S. auto sales performance and inventory levels are major determinants of Canada's auto production since over 70 per cent of our output is exported to the U.S.
- The demand for Canadian produced trucks is affected more by Canadian than U.S. sales performance since almost 60 per cent of Canadian made trucks are produced for the domestic market.
- Approximately 75 per cent of Canadian auto parts and accessories production is exported to the U.S., most of which is sold in the original equipment market.

The main reasons for the current drop in Canadian auto production are:

- the general slump in U.S. auto sales;
- the mismatch of North American-produced models with U.S. sales growth areas (i.e., imported subcompacts);
- the softening sales in Canada.

The Auto Pact affords some measure of protection to Canadian auto assembly production, and indirectly some protection for Canadian auto part

producers as auto producers must maintain production and sourcing here to meet required safeguards. However, their current position is aggravated by their extreme dependence on U.S. new car production, which currently is slumping badly.

Prospects

i) Trade

The auto sector trade deficit will probably continue to worsen in the near term. Our motor vehicle trade surplus will dwindle further since higher energy prices will increase Canadian purchases of fuel-efficient imports, and the soft U.S. auto market and high U.S. inventories will weaken exports. The outlook for the parts deficit is gloomier: exports will be adversely affected by the drop in U.S. auto production.

ii) Interplay of the Cyclical and Structural Problems

The Ontario auto industry is currently experiencing a cyclical downturn. Meanwhile, the industry is undergoing structural changes which will take some time to complete. Thus, an early cyclical upturn does not necessarily mean an immediate return to robust production and employment growth. The structural changes now being made by the North American auto makers will also need to be completed and this is expected to take somewhat longer. However, neither the cyclical upturn nor the structural changes will immediately return Ontario production to previous levels because North American production will still be faced with the longer-term challenge of regaining its previous share of total market.

iii) Production

Auto production in Ontario by the mid-1980's is expected to pick up perhaps to the moderate levels of 1976 but unlikely to the peak levels of 1978.

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Auto parts and accessories produced by the dozen or so larger Ontario manufacturers will generally follow the trend of auto assembly.

Ontario-produced trucks should generally follow the lead of the Canadian economy in manufacturing, agriculture, forestry and mining, i.e., will be the growth commodity.

2. Farm Machinery

Farm machinery production in Ontario is primarily located in Brantford, Welland and Hamilton. Recent cutbacks in employment and production are said by industry representatives to be short term. The downturn in demand for farm machinery is tied directly to poor western crop expectations for 1980 and reduced grain exports in 1979. Farm machinery demand could run at lower levels for a couple of years if necessitated by lower farm incomes because farmers' equipment inventory has greatly improved over the past decade.

3. Textile and Garment Industries

The textile and garment industries of Ontario are large employers oriented primarily to the Canadian market. Production in the medium term is expected to be generally consistent with these industries' 1980 share of the domestic market, providing Federal Government import restrictions are maintained. These industries generally cannot compete in the world markets because of wage differentials. Provincial Government support for textile plant upgrading could ensure least cost prices for Canadian made products but is still unlikely to make those industries completely internationally competitive.

Some minor adjustments could be seen in location of production within Ontario or Quebec but production growth in gross terms is expected to be fairly stable - consistent with overall growth in the Canadian market.

C. TOURISM

Medium term growth in the tourism industry in Ontario will depend primarily upon:

- the relative value of the Canadian dollar in relationship to other nations;
- the absolute cost and availability of gasoline in Ontario and as compared with the U.S.;
- growth in international convention activity;
- relative growth in disposable income;
- the relative condition and availability of tourist facilities in Ontario; and
- the relative effectiveness of Ontario-based tourism promotional activities.

The decline of the Canadian dollar against European and Japanese currencies has dramatically increased tourism from these sources and decreased Canadian and Ontario flows to those areas. Significant relative shifts among these currencies are not foreseen and continued tourism growth in Ontario from these sources is anticipated in the medium term.

The recent differential in Canadian and U.S. currencies combined with higher gasoline costs and rates of inflation in the U.S. are tending to increase tourism in Ontario both by U.S. residents and Ontario/Canadian residents. Federal Government studies of Canadian tourism and boundary statistics indicate a significant change in trends since 1978.

There is also evidence of a shift in transportation modes from automobile to various forms of mass transit, somewhat tied to the development of so called destination resorts. This may be a reflection of several facts, such as population age, residency of the tourist (Europe and Japan), and energy costs.

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Convention activity, a small sub-set of the tourism sector, is a growing area of activity. Ontario is reasonably well equipped on the accommodation side in the larger centres. It is also taking steps to ensure an adequate supply of convention facilities in these areas and thereby should continue to retain its share of the market.

Organization at the local level for tourism promotion in Ontario was revamped by the Provincial Government in the late seventies into a dozen districts in order to provide more sophisticated and cost-effective promotion programs.

Several recent initiatives by both the public and private sectors continue to provide new attractions and programs to complement the existing tourism infrastructure within Ontario. These include the North Bay Ski Package, Vaughan Theme Park (Canada Wonderland), and a general increase in the quality and quantity of natural resource based attractions, (i.e., sport fishing and parks and tour areas).

The Government has also recently announced a Tourist Redevelopment Incentive Program (TRIP) to provide financial assistance for the renovation and expansion of existing tourist facilities in Ontario.

Over the medium term, there is reason for optimism for tourism growth in Ontario from Ontario residents, U.S. residents and particularly offshore residents. Some of this growth lends itself to mass transportation of various forms.

IV. POPULATION

Introduction

There has been and will continue to be a close relationship between Ontario's economic performance and its population growth. This is so, largely because migration, a significant component of Ontario's population growth, is responsive to economic opportunity. Consequently, growth in job opportunities within Ontario, relative to opportunities elsewhere both in Canada and internationally, has and will continue largely to determine Ontario's total population.

Generally, either rapid or slow economic growth in Ontario over the past several decades was matched with similar population growth rates, natural population increase being "topped-up" by immigration from elsewhere. Future prospects for slower economic growth in Ontario, coupled with a low natural increase in population and a tightened national immigration policy, will result in a commensurately slower rate of overall population growth. The spatial distribution of population within Ontario will also continue to reflect, among other factors, economic trends and job opportunities. These trends include:

- suburbanization and deconcentration of manufacturing from central cities;
- capital intensification of resource extraction and processing;
- growth and concentration of the private service sector;
- relatively slower growth of government employment - at all levels.

I. Recent Trends^{*}

Ontario 1976-1979

The population of Ontario increased almost 3% by 238,835 between June 1, 1976 and June 1, 1979. The annual rate of increase of 0.96% was below the projected rate of 1.10% per annum for this period. The difference between the

* Population numbers, analysis and discussion were selected from several Demographic Bulletins, published monthly by Central Statistical Services, Ministry of Treasury and Economics.

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actual and projected growth rates is due to slightly lower actual fertility rates and much lower intake of migrants from abroad as well as an increased outflow of migrants to other parts of Canada. As a result, both of the main components of population growth, natural increase and net migration, are lower than that projected. During the first two years of this period the actual growth rate was very close to the projected one at 1.08% and 1.07% respectively. In the third year (1978/79), an actual decline in growth rate occurred, falling to the 0.7% level.

Economic Regions 1976-1979

For analytical purposes, Ontario has been divided into five economic regions; southwest, east, central, northeast and northwest.

In examining regional growth between 1976 and 1979, two regions grew faster than the Province as a whole, namely, Central Ontario and Eastern Ontario. Southwestern Ontario grew at a slower rate, Northwestern experienced no growth and population in Northeastern Ontario declined (Table 1).

The Central Ontario Region grew by 3.4% between 1976 and 1979 (or 174,100) from 5,050,800 to 5,224,900. Central Ontario growth performance was mainly due to growth in the Toronto-Centred Area and the Waterloo-Wellington Area. In the Municipality of Metropolitan Toronto itself, however, there was little growth. Out of the eighteen counties and regional municipalities comprising the Region, eleven registered growth rates above the Provincial average, six grew at a rate lower than the Provincial average and one county recorded a decline.

In the Eastern Ontario Region, growth between 1976 and 1979 was slightly lower than that of the Central Ontario Region at 3.3%, from 1,149,300 in 1976 to 1,187,200 in 1979, or an increase of almost 38,000. This growth was concentrated mainly in the Capital region (Ottawa-Carleton and Russell County) which grew by slightly more than 24,000 people. Growth was also significant in Frontenac County (which includes Kingston), Grenville and the two easternmost counties of Glengarry and Prescott. Six counties in the region recorded only a modest growth performance and two declined.

The Southwestern Region grew at slower than the provincial average, at 2.7%, from 1,247,200 in 1976 to 1,281,500 in 1979. Only two counties registered above the provincial average growth performance: Middlesex and Bruce (the latter because of Hydro construction in the area). Six counties recorded modest growth rates and two were at a standstill.

POPULATION
ONTARIO AND ECONOMIC REGIONS
1976-1979

Table 1

Region	Year		Change 76-79	
	1976	1979	Actual	Per cent
Eastern	1,149,299	1,187,246	37,947	3.3
Central	5,050,849	5,224,907	174,058	3.4
Southwest	1,247,176	1,281,469	34,293	2.7
Northeast	583,746	576,035	-7,711	-1.3
Northwest	233,395	233,643	248	0.1
Ontario	8,264,465	8,503,300	238,835	2.9

Source: -Statistics Canada, Population 1976.
 -Ontario, Ministry of Treasury and Economics, Central Statistical Services, Annual Population Estimates, 1979.
 -Published in "Demographic Bulletin" by CSS April, 1980.

The Northwestern Region neither grew nor declined, adding only some 200 people to its 1976 census count of 233,400. The Region is comprised of only three Districts: Kenora expanded its population by a fraction (.8%); Rainy River declined by the same proportion; and Thunder Bay was at a standstill at 150,600 recorded at the 1976 census.

The population of Northeastern Ontario declined by 1.3% from its census level in 1976 of 583,700 to 576,000 in 1979. Only one district in this Region, Algoma, had an above-average growth performance. The remaining seven counties/districts recorded absolute and relative declines in population size.

Census Metropolitan Areas 1971-78

The aggregate population of the ten Ontario Census Metropolitan Areas (CMA) increased during the 1976-78 period by 104,300 at an annual rate of 0.97%, below the 1.09% annual growth rate for the provincial population, and also much less than that attained during the 1971-76 period at 1.4% per annum. The CMA's share of the total Ontario population growth declined from 64.0% to 57.8% during the two respective periods. This indicates a distinct slowing down of metropolitan population growth in Ontario, implying that some growth is occurring in areas outside the major urban centres.

Of the ten Census Metropolitan Areas in Ontario, only the Ottawa CMA improved its growth performance, from 1.9% per annum during the 1971-76 period to 2.5% during the 1976-78 period. On the other hand, the declines registered in the previous period in two Census Metropolitan Areas accelerated: CMA Sudbury, from -0.1% to -0.6% per annum, and CMA Windsor, from -0.1% to -0.3% per annum. The remaining seven Census Metropolitan Areas also recorded a decline in their growth rates during the 1976-78 period.

During the 1971-78 period, the scale of population change, measured by the amount of change per 1,000 average population, clearly indicates that the growth pattern among the CMA's was not uniform. The Census Metropolitan Areas can be subdivided into four groups based on the scale of their growth:

Fast Growth 20.1+ per thousand		Moderate Growth 10.1 - 20.0 per thousand		Slow Growth 0.1 - 10.0 per thousand		Declining per thousand	
Kitchener	22.9	Toronto	13.3	St. Catharines	9.7	Windsor	-1.4
Ottawa	22.6	London	11.4	Hamilton	9.1	Sudbury	-2.5
Oshawa	20.9			Thunder Bay	7.3		
				(Montreal	4.8)		

2. Immigration and Population Growth

Over the last 18 years, net migration to Ontario has averaged 49,800 annually and has fluctuated considerably from a low of -2,632 for the year

ending June 1, 1979 to a high of 90,348 in 1966-67. A number of factors which are difficult to quantify precisely have contributed to the wide variations in annual immigration to the Province. Cumulatively, however, their impact on the size of immigration to Ontario is considerable.

To a large extent, changes in immigration flow to Canada and Ontario have been due to very notable cyclical fluctuations in economic activity. There have been three periods of substantial economic slack in Ontario since 1953 and each of these periods of rising unemployment were marked by a significant downturn in immigration. A fourth period is now in progress.

Economic and political conditions abroad have also influenced the flow of immigration to Canada and Ontario. The declining relative importance of Europe as a source of immigrants to Canada in recent years may be attributed to the rapid economic expansion in Europe and the establishment of a free labour market within the European Economic Community which has created an attractive employment alternative for Europeans who might have come to Canada.

3. Population Projections 1976-2001

Current trends in births and deaths in Ontario and continuing low immigration levels could result in a balance of births and deaths in the early part of the 21st century. The only gains in population would be from immigration and if the trends continued, deaths could conceivably exceed both births and immigration with a resultant decline in population. However, because of the high birth rates in the forties, fifties and early sixties, and the high levels of immigration in the post-war period, Ontario now has a relatively young population. The impact of declining fertility rates and slow improvement in survival rates is to some extent ameliorated by the relative youth of the population. However, the average age of the population will increase over the next two decades.

Ontario's population is expected to grow from 8.26 million in 1976 to just over 10 million in 2001. This represents a considerable reduction in the growth rate in the last few years and with continuing declines in fertility rates and a

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relative slowdown in immigration, the overall population growth rate is expected to be as follows:

	<u>Growth Rate Per Annum</u>
1976-1981	1.1
1981-1986	1.0
1986-1991	0.8
1991-1996	0.6
1996-2001	0.4

Distribution patterns in recent years have shown population shifting to the suburban areas. As was seen earlier, the CMA's share of total Ontario population has declined during the 1970's. These trends have been in part the result of:

- desire for change in life-style;
- improved transportation;
- increased rural non-farm living;
- availability of serviced land;
- economic trends and job opportunities (as noted earlier);
- municipal efforts to promote balanced growth.

The most recent Ontario population projections produced, by the Ontario Statistical Centre, by county to the year 2001, are summarized in the following tables. The assumptions of low fertility and 30,000 net external migration are both somewhat higher than experienced most recently. For instance, net external migration for the three years ending in mid-1979 averaged only 18,300.

ONTARIO: POPULATION PROJECTIONS BY REGIONS AND COUNTIES FOR YEARS
1981, 1986, 1991, 1996, 2001

Assumptions: Low fertility; 30,000 net external migration per annum; internal migration at 0.54 per cent of Ontario population

Region/County	1976	1981	1986	1991	1996	2001
Eastern Ontario	1,149,299	1,200,113	1,248,081	1,286,370	1,310,234	1,322,403
Dundas	18,507	17,104	15,674	14,167	12,491	10,627
Frontenac	108,052	112,953	117,141	120,034	121,461	121,826
Glengarry	19,270	19,055	19,003	18,930	18,639	18,161
Grenville	26,025	27,804	29,856	31,947	33,930	35,682
Hastings	105,837	111,104	116,726	121,788	125,593	128,287
Lanark	44,197	43,420	42,761	41,905	40,706	39,175
Leeds	52,579	54,436	56,442	58,301	59,716	60,699
Lennox & Addington	32,633	32,812	32,876	32,779	32,411	31,787
Ottawa-Carleton (R.M.)	520,533	553,226	582,089	604,576	619,782	629,315
Prescott	29,100	31,088	33,283	35,441	37,212	38,654
Prince Edward	22,559	23,083	23,655	24,212	24,516	24,618
Renfrew	89,099	89,049	89,143	88,733	87,096	84,522
Russell	19,735	22,864	26,206	29,697	33,078	36,281
Stormont	61,173	62,115	63,226	63,860	63,603	62,769
Central Ontario	5,050,849	5,374,382	5,676,251	5,941,179	6,156,446	6,325,563
Brant	99,099	105,800	112,694	119,245	124,988	129,852
Dufferin	28,528	36,157	44,283	52,835	61,433	69,796
Durham (R.M.)	247,473	282,496	318,843	355,393	390,212	422,353
Halldimand-Norfolk (R.M.)	89,252	93,325	97,666	101,819	105,298	108,060
Haliburton	10,795	11,891	13,138	14,415	15,660	16,847
Halton (R.M.)	228,497	261,026	295,098	329,594	362,260	392,002
Hamilton-Wentworth (R.M.)	409,490	423,784	436,027	444,504	448,376	448,331
Muskoka (D.M.)	36,691	39,759	43,177	46,613	49,838	52,789
Niagara (R.M.)	365,438	380,712	395,784	409,003	418,589	424,274
Northumberland	64,441	68,123	72,318	76,553	80,338	83,590
Peel (R.M.)	375,910	459,296	545,089	632,972	720,064	803,859

Assumptions: Low Fertility; 30,000 net external migration per annum; internal migration at 0.54 per cent of Ontario population

Region/County	<u>1976</u>	<u>1981</u>	<u>1986</u>	<u>1991</u>	<u>1996</u>	<u>2001</u>
Central Ontario (Cont'd)						
Peterborough	99,930	104,233	108,676	112,604	115,496	117,439
Simcoe	210,691	235,810	261,934	287,913	312,452	335,223
Toronto (M.N.)	2,124,291	2,088,174	2,019,188	1,915,633	1,783,179	1,632,823
Victoria	43,543	45,720	48,302	50,941	53,366	55,532
Waterloo (R.M.)	289,129	325,871	362,248	397,179	429,893	460,205
Wellington	123,736	143,206	163,403	183,606	203,007	221,393
York (R.M.)	203,915	268,999	338,383	410,357	481,997	551,195
Southwestern Ontario	1,247,176	1,309,486	1,372,638	1,430,200	1,477,314	1,514,000
Bruce	57,472	62,220	67,578	73,190	78,630	83,723
Elgin	69,092	71,730	74,584	77,389	79,839	81,723
Essex	310,362	326,256	342,032	356,420	368,199	377,317
Grey	72,176	78,043	84,644	91,500	98,059	104,058
Huron	56,007	57,033	58,540	60,088	61,334	62,179
Kent	106,130	110,563	115,053	119,003	121,943	123,979
Lambton	120,576	129,706	139,148	147,942	155,451	161,787
Middlesex	303,745	315,698	325,626	332,423	335,884	336,727
Oxford	85,337	91,782	98,560	105,136	111,148	116,450
Perth	66,279	66,455	66,873	67,109	66,827	66,057

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Assumptions: Low Fertility; 30,000 net external migration per annum; internal migration at 0.54 per cent of Ontario population

Region/County	<u>1976</u>	<u>1981</u>	<u>1986</u>	<u>1991</u>	<u>1996</u>	<u>2001</u>
Northeastern Ontario	583,746	606,180	629,813	649,709	661,433	666,052
Algoma	122,883	129,240	135,809	141,446	145,237	147,448
Cochrane	96,825	98,104	99,251	99,650	98,728	96,666
Manitoulin	10,893	11,068	11,442	11,898	12,308	12,617
Nipissing	81,739	86,843	92,457	97,741	101,791	104,728
Parry Sound	32,654	32,856	33,285	33,747	33,881	33,791
Sudbury (R.M.)	167,705	176,831	185,816	193,231	198,088	200,871
Sudbury (T.D.)	27,287	27,517	27,855	28,072	27,930	27,418
Timiskaming	43,760	43,721	43,898	43,924	43,470	42,513
Northwestern Ontario	233,395	240,725	247,791	253,389	256,528	257,447
Kenora	57,980	56,567	54,906	52,850	50,191	46,869
Rainy River	24,768	23,907	23,062	22,086	20,800	19,324
Thunder Bay	150,647	160,251	169,823	178,453	185,537	191,254
Total, Province of Ontario	8,264,465	8,730,886	9,174,574	9,560,847	9,861,955	10,085,465

R.M. - Regional Municipality
D.M. - District Municipality
M.M. - Metropolitan Municipality
T.D. - Territorial District

Social and Economic Data
Central Statistical Services
Ministry of Treasury and Economics
November 1978

V. A SPECIAL CONCERN: ENERGY

The energy situation in Canada^{*} as a whole is very favourable. The energy component in Canada's balance of payments was in surplus in the 1970's and amounted to just over \$3 billion in 1979. While the solution of various national energy issues are extremely important to Ontario, the generally positive energy picture in Canada is a tremendous factor in the growth of new business.

The abundant supply of electricity at reasonable costs in Ontario is a major asset. The industrial benefits of the availability of electricity and the technology associated with its growth, particularly nuclear power, shows great promise for the future.

The energy issue, largely brought into public view by OPEC in the early 70's, had an early impact on many sectors of the economy; however, further major impacts are still possible. Oil prices in Canada have not kept pace with world oil price increase levels and thus the potential adverse effects on consumers and businesses have been reduced. The major economic impact of the OPEC pricing policies has been the spill-over of recession and inflation from Canada's trading partners. Further, the rationalization and renewed interest in energy sources caused by OPEC has raised several potential new opportunities for Ontario. Several of these trends and opportunities are listed below:

- There as yet does not seem to be major shifts in travel mode for the movement of goods, i.e., truck to rail or rail to water. This is partially because of long-term existing contractual relationships and incompatible shipment sizes and locational choices.
- Based on several early studies, in terms of travel on a passenger-mile basis, it is quite obvious that the private automobile and jet service are the most sensitive to energy pricing decisions.

* A more detailed discussion of the energy situation is contained in Appendix A: An Address by the Honourable Frank S. Miller, Treasurer of Ontario, May 15, 1980, in London, England.

- Although net travel in the U.S. by private auto for recreational travel seems to be declining, the auto downsizing is a significant deterrant to travel reduction. In other words, smaller cars can travel just as far on less gas.
- There does seem to be some trend both in the U.S. and Canada for a move back into the central cities for housing. In the Toronto area the downtown or central area of the City of Toronto has recently been the most vigorous real estate market in the metropolitan area.
- Depending on major pending decisions on new pipe line projects in Canada, Ontario could stand to receive a substantial economic stimulus for providing major parts of the overall pipeline material and equipment for the project.
- The price of electricity, in abundant supply in Ontario, is expected to decline relative to other forms of energy during the 1980's. This should provide many opportunities for Ontario industry. There may also be renewed interest in the use of coal by industry as the prices of natural gas and crude oil escalate.
- The period of adjustment in terms of development patterns, is still too short and the early evidence too conflicting to draw any conclusions about the effect of energy pricing on the future geographic development patterns in Ontario.

VI. MAJOR DEVELOPMENTS

There are various major development areas within the Province that may have some effect on the future of rail transportation in Ontario. These areas include:

Nanticoke

The Steel Company of Canada is in the final stages of construction of a major new steel-making facility on the shores of Lake Erie in Regional Haldimand-Norfolk. Immediately adjacent to the Stelco facility a major new Texaco refinery and Ontario Hydro generating facility also exist.

In its original decision to locate in Nanticoke, Stelco purchased several thousand extra acres of land to be used as an industrial park for industries that may want to locate near Stelco. Several industries have begun construction of facilities there and several more have announced plans to do so.

Near the Stelco facilities in Nanticoke, the Province has purchased several thousand acres of land for the development of a new community. Construction of the first elements of that community is scheduled for completion within the next couple of years.

Bruce Hydro

Ontario Hydro is nearing completion of the initial phase of a major nuclear power generating station on Lake Huron in Southwest Ontario. The initial impact on the area in Bruce County was substantial, with several thousand construction workers located there for several years.

Adjacent to the facility, the Ontario Government is exploring the feasibility of developing various industries that may be able to take advantage of the excess heat generated by the generating station. Should the prospects appear promising - several new industries could be expected to begin operation roughly adjacent to the Ontario Hydro site.

Edwardsburg

Several years ago the Province purchased a major land site in Eastern Ontario near Edwardsburg for new economic and industrial initiatives that may benefit from a location in Eastern Ontario.

Onakawana

A major lignite deposit exists in Northeastern Ontario in the James Bay lowlands. This potential resource, with energy trends changing rapidly, could become a highly useful energy alternative in the future. Were it to be developed, major new transportation links could be required.

Other

Northern and Eastern Ontario are rich in many natural resources and mineral deposits. Some have not yet been exploited because of world market conditions and further discoveries can be anticipated. However, several of the resources available that may be tapped over the next twenty years, should world market conditions allow, include gold, iron ore, uranium, phosphates and various other industrial minerals. Depending on the timing and location of the resource - many of the potential areas of the Province involved would likely require improved transportation links.

APPENDIX A

AN ADDRESS BY

THE HONOURABLE FRANK S. MILLER
TREASURER OF ONTARIO AND
MINISTER OF ECONOMICS

TO THE

FORECAST ONTARIO/CANADA DINNER
THE INN ON THE PARK
LONDON, ENGLAND

May 15, 1980



In April 1979, when I last addressed a London audience, I spent some time describing the Province of Ontario because I recognize that the distinctive qualities of our province, that we in Ontario take for granted, are blurred when seen from this distance. I reminded you that Ontario is a very large place, geographically the same size as the United Kingdom, West Germany and France combined. But size is not, in my view, our most impressive quality. We have developed a strong, balanced economy that has shown resilience in the face of deteriorating economic conditions around the world. An economy that, I believe, is poised for further expansion and development in the 1980s.

Tonight, I want to talk about some of the economic attributes of Ontario that may not be obvious to those who focus on the economic fortunes of Canada as a whole. National averages may disguise what is outstanding in Ontario -- or any of the Provinces of Canada -- at the same time, one should not make the mistake of judging our entire country on the basis of any one province.

Canadian provinces are active, almost always noisy, partners in our federation. Our federal system gives the provinces a heavy burden of government responsibility, including education, highways, social services, health, natural resources, and the power to raise revenues through a variety of taxes. In fact, nearly half of the expenditures of the government of the United Kingdom would be spent, and half of the tax revenues raised, at the regional level, if you adopted our constitution. But adoption is out of the question since, in a very real sense, the United Kingdom parented our constitution, and our major constitutional document is still an act of the British House of Commons (to the chagrin of some Canadians).

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Our two nations have drifted apart since the end of the second world war and particularly since your entry into the European Common Market. Although the close trading relationship that existed under the Commonwealth trade preference system may no longer exist, the bond between Canada and the United Kingdom is too strong to be broken by a mere change in the pattern of trade. Our ties embody a common heritage and tradition which provide us with an extraordinary degree of understanding and capacity to communicate. Moreover, we would like nothing better than to restore that trading relationship and I, personally, look forward to the day when that may be possible.

As strong as our links are with United Kingdom, there is still a disconcerting tendency for us to be lumped with the United States in that all encompassing expression "America". The first reaction of most Canadians to being lumped with the United States is usually a howl of indignation. We are different from the United States and intensely proud of our distinctions.

The second reaction is to acknowledge that indeed we are North Americans; that we share a continent with the United States which is richly endowed with resources and populated with diverse and dynamic peoples, a combination that has afforded each country a uniformly high standard of living.

Our position in North America brings with it some difficulties as well. Within the North American economy, we are subject to many of the same negative forces that affect our neighbour to the south. To some extent we must take the bad with the good. For example, our automobile industry is experiencing difficulties not because of a downturn in the Canadian market but because of problems on the U.S. side of the border.

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But there are important differences that make Ontario and Canada better able to face tough times when they occur. And it is some of these distinctive qualities that I would like to share with you this evening.

There are three topics I would like to deal with:

- . First, our approach to fiscal management -- and here, as the Ontario Treasurer and Minister of Economics who has just presented a budget to the Legislature, I shall naturally have more to say about Ontario than the rest of Canada.
- . Second, the energy situation in Ontario and Canada -- and here I want to report how we are coping with the energy adjustments that the industrialized world is facing and to mention some of the real opportunities that we see emerging from the adjustment process.
- . Finally, I want to touch on some of the factors that have made dramatic improvements in our competitive position, in particular our highly trained, stable labour force.

FISCAL MANAGEMENT

The philosophy of the Government of Ontario toward fiscal management puts the private sector very much in the forefront. I have incorporated that philosophy in the two budgets that I have had the honour to present to the Ontario Legislature, continuing a tradition that is yielding positive results for Ontario.

The key challenge I identified in my 1979 budget was job creation. Job creation has been a priority for us in the 1970s because unprecedented numbers of young adults, who were born during the extraordinary increase in the birth rate that occurred in the 1950s, are now flooding into the labour market.

In order to integrate them into the labour market, the Ontario Government changed the emphasis of fiscal policy in a major way. The fiscal strategy shifted from a capital building phase to one of expenditure restraint and

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fiscal flexibility. This enabled us to develop youth-oriented job-creation programs and establish a system of incentives for employment-creation industries.

The results this past year have been good. Employment in Ontario increased by 4.2 per cent in 1979 -- 161 thousand new jobs were added, every one of them in the private sector. In relative terms, Ontario's performance compares favourably to that of industrial nations and is slightly ahead of the average for Canada as a whole.

ONTARIO'S JOB CREATION RECORD
1970-1979
(Per Cent, Average Annual Growth)

Table 1

Ontario	3.0
Canada - all provinces	2.8
United States	2.2
Japan	0.9
United Kingdom	0.1
Germany	-0.4

Source: Statistics Canada and OECD.

Before leaving the topic of job creation, I want to point out that employment growth has occurred across a wide range of economic activity, reflecting Ontario's balanced industrial structure.

The private sector has responded to our budgetary philosophy by generating the jobs that the Province needs. The confidence that business has in the Ontario economy is also reflected in the strength of investment.

Over the past decade, Ontario has sustained a rapid rate of growth in investment. The average annual increase in investment has been over 10 per cent in the manufacturing sector. According to a recent federal government

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report, large manufacturing firms in Ontario increased investment spending 31 per cent in 1979 and, furthermore, they plan increases of 73 per cent in 1980.

Just to give two examples, the Ontario steel industry has capital projects worth nearly \$1.5 billion underway and transportation sector spending is expected to increase this year to about \$1 billion.

Many factors have contributed to the brightening of our investment climate. One element of government policy that has played a vital role is the Employment Development Fund that I announced in my 1979 budget. It has been an effective catalyst in attracting significant investment during a period of escalating interest rates and uncertainty in the North American economy. To date, over \$2 billion of private investment has already been secured as a result of assistance from the Fund.

We have assisted the Ontario pulp and paper industry in its \$1 billion modernization program and we are contributing to the revitalizing of the Ontario automobile industry as it undergoes the massive retooling needed to adjust to new market conditions.

Throughout the 1970s -- a decade future economic historians will no doubt characterize as turbulent -- the Ontario economy has performed solidly. Yet, along with every other industrial economy, Ontario faced fundamental problems of adjustment following the upward spiral in oil prices that began in the mid-seventies. In spite of the combination of inflationary and recessionary pressures set off by the oil price spiral, the Ontario economy grew in terms of real output at an average rate of 3.7 per cent annually during the 1970s. This performance outpaced that of West Germany, the U.S., the U.K., indeed, the combined total of OECD countries.

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ONTARIO'S REAL GROWTH OUTPACES
MOST INDUSTRIAL NATIONS, 1970-1979
(Per Cent, Average Annual Growth)

Table 2

Japan	6.1
Canada	4.2
Ontario	3.7
Germany	3.2
United Kingdom	2.1
OECD Countries	3.5

Source: Statistics Canada, OECD and the Conference Board in Canada.

Finally, on the inflation front our performance has been relatively good. I am not happy to report prices are rising at an annual rate of about 9 per cent, nor am I happy that there is some evidence of an upward trend. However, our inflation rate has been below that of our major trading partners and I am confident that it will remain so.

CONSUMER PRICE INDEXES,
ANNUAL RATE OF CHANGE, 1979 AND 1970-1979

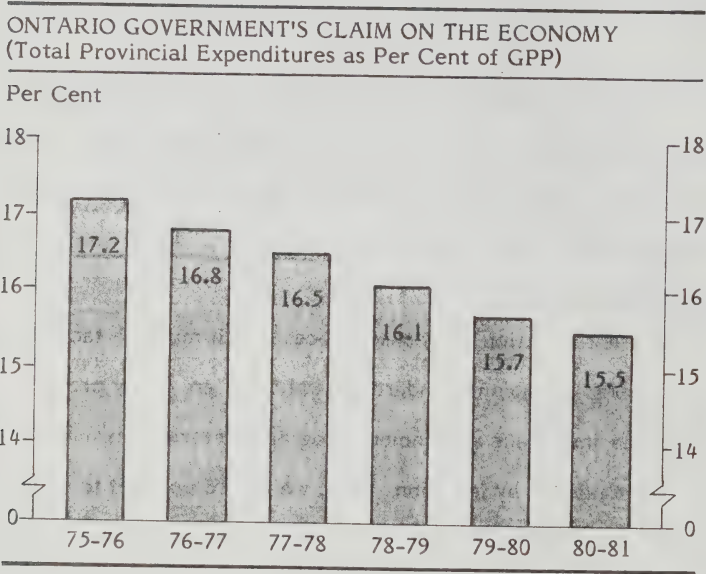
Table 3

	Annual Change 1979	Average Annual Change, 1970-79
Canada	9.1	7.4
Germany	4.1	4.9
United States	11.3	7.1
Japan	3.6	9.1
United Kingdom	13.4	12.6

Source: Statistics Canada.

The performance of the Ontario economy that I have just outlined is, in part, attributable to the firm application of the budgetary philosophy of the Ontario Government. Ontario has made a determined effort to restrain government spending and public sector employment.

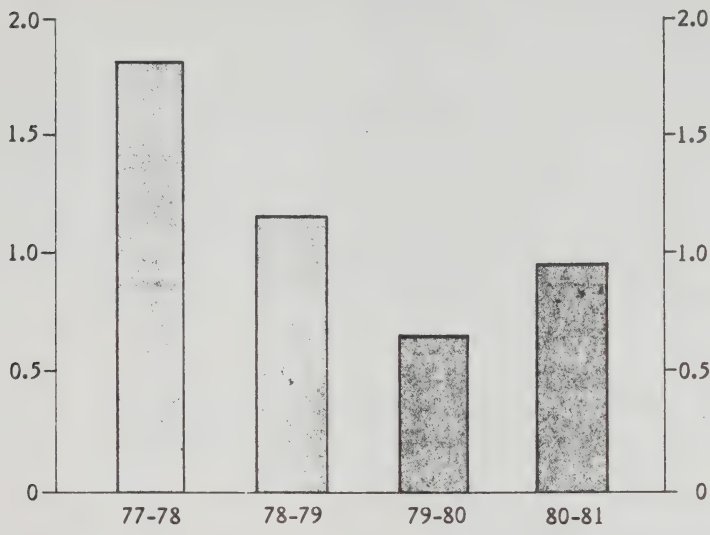
For the past five years, the Ontario Government has led the way in Canada in improving efficiency in the delivery of public services. In 1975-76, Provincial spending accounted for 17.2 per cent of the Gross Provincial Product (GPP) in Ontario. This year I am projecting that figure will be down to 15.5 per cent.



When I presented my budget last month, I was able to report that the reduction in the Ontario deficit exceeded the original target by \$494 million for the last fiscal year. In this fiscal year Ontario's net cash requirements will be somewhat higher than last year's deficit. However, in a year of economic uncertainty I believe that it is appropriate to allow a pause in our deficit reduction strategy.

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ONTARIO GOVERNMENT'S CASH REQUIREMENTS
(\$ billions)



Persistent inflation has consequences which must be faced if we are to maintain the socio-economic standards of which we are justly proud. We are not prepared to see important government programs deteriorate; nor will we ignore groups who are hard hit by inflation. Also, we are committed to maintaining and improving our incentive programs to increase investment, job skills and productivity.

So, while still meeting our restraint targets, in my budget I announced new measures to deal with each of these concerns.

- . I increased the expenditure allocations for our health system because it is faced with strong cost pressures that could not be overcome by increasing efficiency.
- . I increased assistance for Ontario's senior citizens in the form of property tax relief, a grant program to offset sales taxes and increased income support for low-income pensioners.
- . I introduced a series of measures to help small businesses, to encourage new participation in Ontario's important mining industry, to promote research and development and to stimulate the conservation of energy and the substitution of alternative fuels for petroleum-based products.

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Finally -- and this is the most important feature of the budget for most Ontarians -- we accomplished all this without any tax increases.

Because the outlook for the Ontario economy is often affected by factors beyond our control, an important goal of our budgetary policy has been to equip the Ontario economy to overcome problems and to seize opportunities when they arise. In the short run there appears to be no shortage of problems, but opportunities abound, as well.

The consequences of oil price increases, high interest rates and recession in the U.S. and our other trading partners will be felt in Ontario. As a result, 1980 may turn out to be more difficult than last year but I still expect a year of real economic growth. Job creation will be slower, but still healthy, when one considers the remarkable pace of job creation last year. I am particularly gratified by the projected strong investment performance in manufacturing.

Inflation still looms as a major economic problem. While it is an international problem, it is of particular concern to the Ontario Government. We will continue to push the federal government to adopt a viable national anti-inflation policy to complement our own initiatives in setting the framework for a decade of development in the 1980s.

A FAVOURABLE ENERGY SITUATION

On the energy front, I am sure that most of you are aware that Canada is in a favoured position. The energy component in Canada's balance of payments was in surplus in the 1970s and amounted to just over \$3 billion in 1979. In Western Canada, the Arctic and the Atlantic offshore, there are continuing reports of successful oil and gas exploration activities. In 1979, the reserves of natural gas increased by 3.4 trillion cubic feet in Alberta and 3.2 trillion cubic feet in the Arctic. Canada's supply position on natural gas has improved so much that late last year the National Energy Board approved the export of an additional 3.75 trillion cubic feet. The export will take place over a number of years and will have a total value of some \$16.8 billion at the current export price.

With respect to crude oil, the continued decline in production from the older oil fields will increase Canada's reliance on foreign sources over the next several years. Because of this, Canada has turned to the development of the oil sands, enhanced oil recovery projects and increased exploration activities. Certainly one of the more exciting developments in the past year is the Hibernia oil discovery off the coast of Newfoundland. It is too early to have firm numbers on the extent of the oil discoveries; however, according to one report, recoverable reserves in the Hibernia field alone are placed at between 800 million barrels and 1.5 billion barrels. Oil has also been discovered at Ben Nevis, on a separate geological structure about 25 miles away from Hibernia. You can well imagine the interest of Canadians in the speculation that these oil discoveries might ultimately rival the North Sea fields in size.

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In Canada's Arctic, exploration efforts are paying off. One giant field discovered last year, the Whitefish field, may yield 3 to 10 trillion cubic feet of natural gas. Already this year, there are encouraging reports of new finds. Estimates of gas reserves in the Mackenzie Delta and Arctic Islands regions are now placed at 25 trillion cubic feet. It will take multi-billion dollar investments and the application of some very advanced undersea pipeline technology to develop and bring the gas to Ontario.

To achieve this objective, the Ontario Government, the federal Crown corporation Petro-Canada, TransCanada Pipelines Ltd., Panarctic Oils Ltd., and the Tenneco Oil Company of Canada, have joined together to form the Polar Gas consortium. Polar Gas has spent \$70 million studying and planning the construction of a pipeline system which is truly mammoth in proportion. There are several routes being considered. The shortest route entails some 3,115 miles of large diameter (54") pipe. Including escalation and financing, it may cost in the order of \$15 to \$20 billion and be in service before 1990. Building the line would create 1/4 million man-years of employment in the construction and supply industries.

The technological dimensions of the project are immense. For example, the project consortium is examining methods to lay pipe across M'Clure strait --a distance of some 76 miles. The strait is permanently covered with ice which varies in thickness from 7 to 39 feet. On shore, the concrete covered pipe would be welded into mile-long sections and, using the ice cover as a work platform, would be hauled along the ocean bottom for positioning at depths of up to 1,650 feet. The sections would then be joined together using a submersible vessel which would encapsulate the joint and provide space for men and equipment.

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At a design capacity of 2.15 billion cubic feet per day, the line would provide the energy equivalent of 370,000 barrels of crude oil daily. At today's prices of crude oil, that yields a value of \$4.7 billion annually in Canadian dollars. The economics are so favourable that the costs of the line could double and still leave room for a 15 per cent rate of return. The studies indicate that the line is technically feasible. I have great confidence in our skills and I might remind you that Canada has been at the forefront of gas development and pipeline technology for more than two decades.

The Polar Gas Project represents an enormous economic opportunity for Canada. It will provide us with a major, secure energy source in the 1990s and into the 21st century. In the 1980s, the project would provide large and lasting impacts on such Canadian supply industries as steel, metal fabricating, heavy and light equipment, building products and scientific equipment. The project would spur major expenditures on Arctic resource development throughout the 1990s. It is not surprising, then, that the Ontario Government believes that it is in Canada's national economic interest to construct the line.

With respect to electricity, Ontario will continue to have an abundant supply of relatively low-cost electricity throughout the 1980s. In a world where we are constantly reminded of uncertain oil supplies and the prospect of spiralling oil prices, a dependable electricity supply is particularly welcome, especially when that dependability has been assured for the future.

Ontario is the focus for nuclear power development in Canada. Ontario ranks with Britain, France and West Germany in terms of the electricity produced from nuclear reactors.

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NUCLEAR POWER GENERATION IN
SELECTED INDUSTRIAL COUNTRIES, 1979
(Billions of gross kilowatt-hours)

Table 4

Britain	38.6
Canada (Ontario)	38.4
France	39.9
Japan	62.0
Sweden	21.0
Switzerland	11.8
West Germany	40.4
United States	268.3

Source: U.S. Monthly Energy Review.

Canada has developed a nuclear power system which we believe is superior in terms of economics, performance, safety and reliability. Of course, I am referring to the CANDU pressurized heavy water reactor.

Our practical support for the CANDU reactor is continuing. Ontario Hydro is in the process of constructing 12 more reactors which will increase nuclear power capacity from 5,000 to 13,600 megawatts. The entire construction program will expand total electrical generation capacity roughly 5 per cent annually throughout the decade. Since demand is expected to grow at an annual rate of 3.4 per cent, Ontario can continue profitable export sales to neighbouring utilities and shift more of Ontario's energy consumption to electricity use.

The ability to substitute electricity for other less secure fuels presents Ontario with a secure energy alternative and a major economic opportunity. In addition, the availability of large amounts of power will also be attractive to business interests contemplating industrial expansion and new locations.

After a difficult period in the 1970s, Ontario's electricity costs will be virtually stable in real terms throughout the 1980s because so much is generated from inflation-proof sources -- namely, hydraulic and nuclear power plants. This

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is in marked contrast to anticipated increases in oil and natural gas prices in Ontario. It is also in marked contrast to anticipated increases in electricity costs in neighbouring areas of the United States where there is a heavy reliance on oil-fired electric power generation.

Many American utilities are struggling with the environmental and financial problems of converting from oil to coal. At the same time, a shift to nuclear power appears to be in a long-term stall. In the month of January alone, plans for 5 nuclear plants were cancelled. All five of these were located in states bordering Ontario. Undoubtedly, the accident at Three Mile Island has been a major setback to the nuclear power industry in the United States.

The performance of the CANDU heavy water reactor is surely the envy of utilities around the world. Based on a survey of 104 of the world's largest reactors, all 8 of Ontario's reactors in 1979 were in the top 40 and 6 were in the top 12 in terms of capacity utilization. On the lifetime performance basis, Ontario Hydro has 6 in the top 7.

Our success with nuclear power is due to a number of factors, the most obvious of which is the safe, reliable performance of the CANDU pressurized heavy water reactor. The record of CANDU demonstrates Canadian excellence in the application of advanced technology. Our specialized technological skills are becoming increasingly apparent in telecommunications, transportation equipment, electronics and natural resource development. The CANDU reactor, and our accomplishments in the other areas I have mentioned, were brought about by Canadians who do the work involved in designing, building and operating machinery in these technically sophisticated areas. I say this because there is

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popular myth that we are dominated by American technology and have no skills of our own making.

I would now like to comment briefly on the even greater expectations we have of the performance of our labour force in the 1980s.

LABOUR CONTRIBUTES TO ONTARIO'S COMPETITIVE ADVANTAGE

In addition to being well placed in terms of energy, our goal has been to give Ontario the ability to adapt and profit from the changing economic circumstances of the 1980s. In large part we are counting on the skill, enterprise and stability of our work force and on programs designed to increase the efficiency of our labour market.

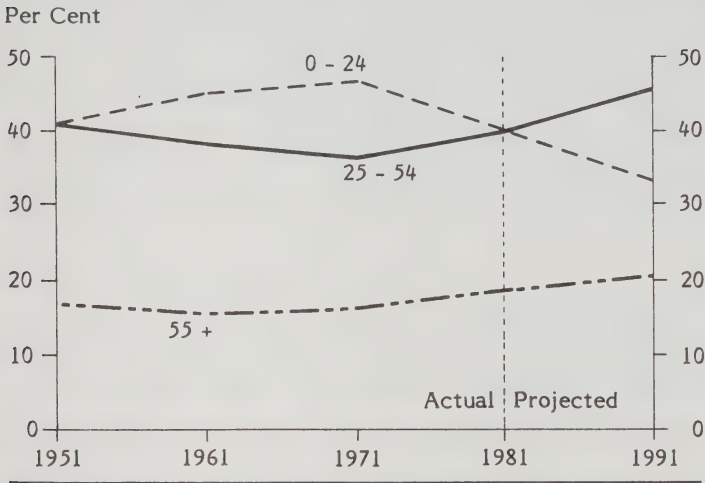
At the beginning of my remarks, I said that there was a sizeable increase in the birth rate in the 1950s. The dimensions of this demographic phenomenon, and the impact it has had, and will continue to have, on our economy have not been well understood, especially by those in countries with different demographic experiences.

During the "baby boom" decade from about 1947 to 1957, the birth rate in Canada was nearly twice what it is now, (nearly 30 per 1,000 inhabitants compared to about 15 now). It was nearly 20 per cent higher than the U.S. birth rate, at a time when the U.S. rate was regarded as very high indeed. The average family size in Canada rose from a pre-second world war low of about 2.5 children to an average of nearly four children per family in the late fifties. After the mid-1960's, the birth rate diminished each year and the average number of children per family now is down to 1.8.

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This population wave had major consequences for governments, some of them expensive. For example, one of the first results was to bring about a massive expansion in the education system -- a provincial responsibility in Canada, not a central government responsibility.

DISTRIBUTION OF ONTARIO POPULATION BY AGE GROUPS
1951-1991



As the baby boom generation grew older and started to spend money, they began to have a major impact on business as well. But tonight I want to talk about the baby boom group as producers rather than as a very large block of consumers. As they enter the labour market, the characteristics of the labour force are changing.

Annual growth in Ontario's work force will decline from 3.3 per cent in the 1970s to 1.9 per cent in the eighties. In absolute terms, that's a drop from 120,000 to 90,000 new entrants per year. The number of young people in the

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labour force -- those between ages 15 and 24 -- will peak early in the 1980s and will then decline for the rest of the decade. This should ease one of our long-standing unemployment problems. Instead of increasing by around 34,000 each year, as in the 1970s, the young labour force of the eighties will actually decline in size.

Of particular interest to businessmen and investors will be the fact that future labour force growth will be concentrated in the prime age group -- those between ages 25 and 54. This group could grow by an average 87,000 workers a year in the 1980s, compared with 78,000 annually in the seventies. This is the age range when labour force attachment is strongest and when workers are most productive.

As Minister of Economics, I am particularly interested in those members of the labour force who become entrepreneurs -- the risk-takers. I believe there will be an upsurge of entrepreneurial activity and new enterprise in Ontario in coming years. As the "baby-boom" matures, the proportion of the population in their mid-thirties (35-39) will increase from 5.8 per cent in 1976 to about 8 per cent in 1986. Not only are these years of high productivity, but research in Canada tells us that most entrepreneurs start their first company when they are in their mid-thirties.

And there are opportunities in Ontario. The restructuring of the Canadian economy as a result of higher energy prices, the adjustment to the new world of GATT, and the advent of computer-chip and microelectronic technology -- all open up new horizons for entrepreneurs. Already, 81 per cent of Canada's solar manufacturing firms are located in Ontario. The Government of Ontario is looking for fresh policies to assist entrepreneurs and new enterprises; policies

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that will complement our existing programs for helping small business and stimulating research and development.

The ability of the labour force to adapt to new circumstances and to take advantage of new opportunities depends, of course, not only on enterprise but on skill.

Ontario's universities, community colleges and apprenticeship programs, plus a steady stream of immigration, have traditionally provided the economy with an assured and diverse range of skills. As the pace of immigration has slowed, however, and as labour market needs have changed, Ontario has recently adopted new policies to ensure efficient operation of the labour market.

We are putting more emphasis on on-the-job training. In order to ensure that the skills created are those in demand, Ontario has stressed employer and community input to the design and implementation of industrial training programs. We have set up a Manpower Commission, reporting directly to Cabinet, to oversee manpower programs and labour market information. We are also pursuing policies to increase efficiency through upgrading the skills of those already in the labour market and through facilitating labour mobility.

An indication of the overall productivity of Canadian workers is given by recent trends in our unit labour costs. Canada's cost performance in the 1970s compared favourably to most industrialized nations. Canadian unit labour costs, in U.S. dollar terms, fell 1.3 per cent in the manufacturing sector between 1976 and 1979. During the same period, U.S. costs rose 21.6 per cent.

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MANUFACTURING UNIT LABOUR COSTS
1970-1979, AVERAGE ANNUAL CHANGE
(Per Cent)

Table 5

	Domestic Currency	U.S. Dollars
Canada	6.6	5.7
United States	5.6	5.6
Japan	8.2	14.7
France	9.2	10.1
Germany	6.1	12.4
United Kingdom	14.3	10.8

Source: United States Bureau of Labour Statistics, and OECD.

With the enormous numbers of young adults who were born in the 1950s entering their most productive years, with new opportunities for entrepreneurs, with a skilled and flexible labour force, and with an enviable record in unit labour costs, the Ontario economy is well placed to meet the challenges of the new decade.

I believe the 1980s will be an exciting time in Ontario. That belief is founded upon my confidence in our competitiveness in terms of labour and energy, and my conviction that responsible fiscal management will contribute to a climate that will attract investment and provide opportunities for innovation and growth.

In a world where economic links between nations must grow, it is important to have opportunities such as this to enhance our mutual understanding. It has been a special pleasure for me to come to London to speak about some of the attributes of my Province. In the course of my remarks I hope I have been able to magnify your view of the Province of Ontario.

Thank you.

THE IMPORTANCE OF RAILWAYS IN SERVING
REMOTE NORTHERN COMMUNITIES

Paper prepared for:
Ontario Task Force on
Provincial Rail Policy

Ministry of Northern Affairs
Policy Development Branch
July, 1980

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SUMMARY

This paper presents an overview of rail dependence in the small or remote communities of Northern Ontario. It describes the nature of the need and identifies in general terms those groups or communities most likely to feel the impacts of any reduced rail service.

There are four main conclusions:

- . Most of the northern rail communities have existed for many years; they remain permanent settlements with stable populations.
- . By its policy and programme actions, the Government of Ontario has confirmed the existence of these and other small communities; for recent example, the Isolated Communities Assistance Fund and The Local Services Boards Act, 1979, both directed to the unorganised communities and administered by the Ministry of Northern Affairs.
- . An analysis of rail dependence in the small communities requires a social and psychological perspective as well as an economic one.
- . Rail may well be just one of several ways to meet the transportation and employment needs identified. For now, however, it is the basic mode, and one deeply woven into the social fabric of many communities. In the absence of other actions to meet the transportation needs of the small northern communities, the introduction of even minor changes could have major local impacts.

THE IMPORTANCE OF RAILWAYS IN SERVING REMOTE NORTHERN COMMUNITIESI. INTRODUCTION

It is well known that rail was basic to the opening up of Northern Ontario, bringing settlers from the south and from Europe and giving new access to natural resources such as timber, mineral deposits and the agricultural lands of the northeast claybelt.

Perhaps less recognised - and less appreciated - is the whole pattern of life that developed around rail. Before the advent of the auto or the aircraft, with settlements few and far between, the railways in the north meant contact, the communication of people and goods with the world beyond. Many of the first rail communities were base camps for the railway labour gangs; later they became section heads or divisional points in the operation of the railways. Now, as then, rail continues to mean employment, access to services, trade and social contact for many small settlements across the north.

Dependence on rail for the movement of people and goods can be examined on at least two scales. At the personal level, one may rely on rail for getting to and from school or medical appointments, for bringing in foodstuffs and other household supplies and for conducting a whole range of personal business. At the community level, local retail trade, tourism and government services may be very much tied to rail.

This paper presents an overview of these needs and identifies the groups or communities likely to be most affected by any overall reductions in rail service in the absence of compensatory measures in other areas.

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The focus is on the smaller settlements. Larger municipalities like North Bay, Cochrane and Thunder Bay rely on rail to a great extent, primarily for the shipment and trans-shipment of goods. This is an important aspect of rail (freight) service in Northern Ontario, but one meriting a separate review.

II. RAIL COMMUNITIES AND RAIL SERVICE

Four main railways operate in Northern Ontario: The CNR, the CPR, the Algoma Central Railway and the Ontario Northland Railway, this last owned and operated by the provincial government through the Ontario Northland Transportation Commission. Figure 1 gives a diagrammatic indication of routes; three routes offer freight service only.

To date, communities that have been most concerned about the prospects of reductions in service are those along the CN northern line, from Capreol to Winnipeg. This follows in the wake of a federal government announcement, January 1976, that passenger rail services across the country would have to be "rationalised". Table 1 gives some indication of the basis for this concern among the northern line communities.

This table shows that for some communities rail is the only means of access. For others, there is no adequate or reliable alternative; for instance, less than half the communities listed are situated on hard-surfaced roads. For still others there is no alternative, scheduled, public mode of transport. Residents can and occasionally do charter floatplanes or ski-equipped planes for essential purposes. This is a costly option for groups or individuals, and one in any case not available during break-up and freeze-up times.

Fig. 1.
RAIL ROUTES IN NORTHERN ONTARIO

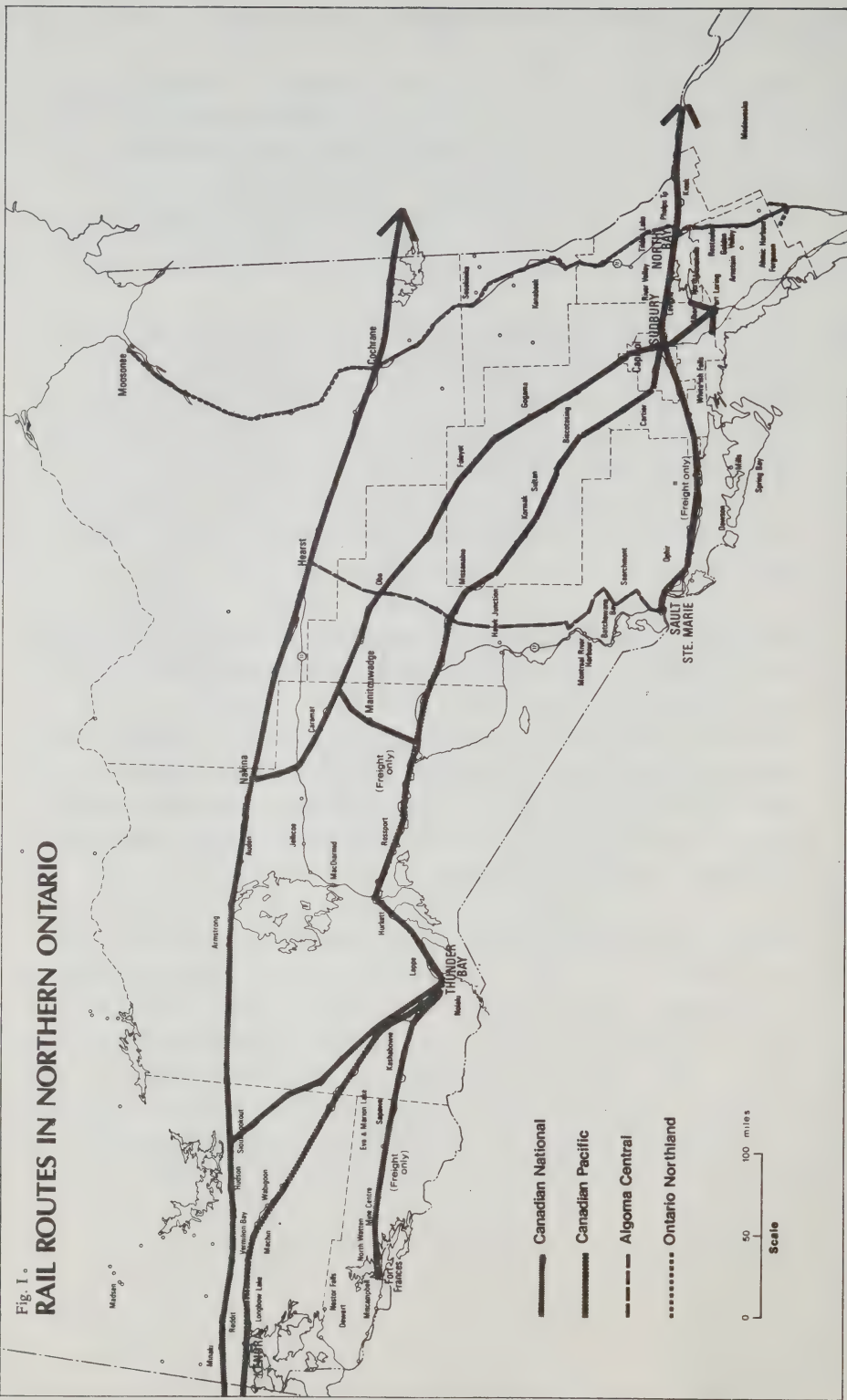


TABLE 1

TRANSPORTATION CHOICES -SMALL NORTHERN COMMUNITIES, CN NORTHERN LINE

TRANSPORT MODE

<u>COMMUNITY</u>	<u>POP.</u>	<u>RAIL</u>	<u>ROAD</u>		<u>GRAVEL OR BUSH</u>	<u>BUS</u>	<u>SCHEDULED AIR SERVICE</u>
			<u>HARD</u>	<u>SURFACE</u>			
<u>CAPREOL- NAKINA</u>							
Capreol	3,918	x	x			x	
Westree	40	x			x		
Gogama	700	x	x			x	
Tionaga					x		
Palomar			x			x	
Foleyet	800	x	x			x	
Elsas		x					
Dunrankin							
Peterbell		x					
Fire River		x					
Oba	75	x			x		
Hornepayne	1,683	x	x				x
Hillsport	84	x			x		
Stevens		x			x		
Caramat	325	x	x				
Longlac	2,284	x	x			x	
Nakina	944	x	x				

Notes: . Table illustrates transportation choices of communities along CN northern line only. Many communities along Algoma Central, Ontario Northland, CP and other CN lines have similarly limited access.

- . Actual rail service varies depending on whether peak or off-peak season; usually local trains more frequent at peak times. Both passenger and freight trains will stop in cases of emergency; otherwise usually only a few scheduled stops (e.g., two between Armstrong and Winnipeg on transcontinental). Trains, however, will stop to detrain revenue passengers or on advance notice, to entrain revenue passengers.

TABLE 1 (Continued)

TRANSPORT MODE						
COMMUNITY	POP.	ROAD				
		RAIL	HARD SURFACE	GRAVEL OR BUSH	BUS	SCHEDULED AIR SERVICE
<u>NAKINA- MALACHI</u>						
Aroland	300	x		x		
Kowkash		x		x		
Auden	103	x		x		
Ferland	80	x				
Mud River	40	x				
Armstrong	500	x		x		x (Class III only)
Collins	100	x				
Allanwater	50	x				
Savant Lake	250		x		x	
Ghost River						
Superior Junction		x	x			
Sioux Lookout	3,006	x	x		x	x (5 d/wk via Dryden)
Hudson	583	x	x		x	
Amedale				x		
Red Lake Road	241	x	x		x	
McIntosh	107	x		x		
Quibell	115	x	x			
Redditt	170	x		x		
Minaki	330	x	x			
Malachi		x		x		

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Table 1 does not include the 10,000 to 12,000 residents of Indian reserves and settlements accessible only by air, north of the CN line. For these people, places such as Sioux Lookout, Nakina and Longlac serve as urban centres, meeting a variety of everyday needs. Moreover, such communities are used as stopover points en route, via rail, to Winnipeg for active medical treatment or other high-order functions.

III. ROLE OF RAIL IN COMMUNITY LIFE

Figures compiled in 1978 by (then) TEIGA and MTC show that a local pattern of rail usage prevails: about 2/3 of all trips are short-haul, to and from neighbouring communities or out to Winnipeg or Sudbury, and only 1/3 to points beyond such as Montreal, Toronto and Vancouver.* For example, there is considerable activity between Sioux Lookout and Winnipeg, between Ferland and Armstrong and between Aroland and Nakina. Interestingly, Armstrong is oriented to Sioux Lookout and not to Thunder Bay, even though the actual distance is about the same either way.

Residents and businesses in these small communities rely on rail to meet a whole range of basic needs:

- travel for routine medical examinations, active treatment or follow-up;
- supply of household goods - e.g., food, building materials, diesel fuel, propane and coal-oil (important where electrical power not available or available only for certain uses);
- travel for social purposes, personal business - e.g., clergy, police, circuit courts, social workers, welfare administrators regularly use rail or cause it to be used by their clients;
- transport to and from schools, for both students and teachers (weekends, holidays, etc.);
- mail service (important where telephone service is inadequate or lacking);

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*MTC, "Ontario's Objectives for Transcontinental Passenger Train Services to be Operated by VIA Rail Canada", February 1978, and background material prepared by staff.

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- employment - e.g., railway maintenance and operations, access to trapping, guiding opportunities;
- trade and interchange - e.g., maintenance of retail inventories, specialised services (e.g., funeral services), transport of guests into and out of lodges.

The economic base of Hornepayne, a town of 1,600 population, rests almost wholly on rail. In fact, CN has recently given notice that it will be expanding its operations there. Sioux Lookout (pop. 3,000) is heavily dependent on rail for direct job creation as well, but serves also as a social and business meeting point and a trading focus for reserves and settlements to the north of the CN line. For many residents in these and other communities, rail is a lifeline and marks a recognition of their existence and their contribution to the larger provincial economy.

IV. SOME LIKELY EFFECTS OF CHANGES IN RAIL SERVICES

If there is a single dominant feature of all the rail communities, it is their extremely fragile social and economic environment. The community profiles attached as Appendix 1 show that choices are limited or even lacking in almost every aspect of their lives. What may to an observer seem to be minor changes could actually produce major impacts.

There could be three kinds of impact if rail services were altered so as to create an overall reduction in service:

- loss of amenity,
- inconvenience, or
- hardship.

Those groups most severely affected would be the heaviest users: the elderly; the low income; Indians, Metis and

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Non-Status peoples; those without cars or access to another mode of public transportation (e.g., bus).

Those communities most affected would be the trading centres and the settlements with no other reliable means of access. It should be noted that only a handful of communities along the line have local government* - a significant disadvantage when attempting to express and muster support for the local point of view.

The Canadian Transport Commission's Final Plan** originally called for the reduction in daily trans-continental passenger service along the CN northern route to three times weekly. This caused considerable public outcry. A study of the testimonies given during the CTC hearings held in Sioux Lookout, Hornepayne and Capreol in December 1979 leads to the conclusion that such a cutback would have produced direct effects relating to the use of the main line service as well as exacerbated existing inadequacies in the local services.

The Final Plan, for instance, was criticised on grounds ranging from the present difficulties with checked baggage, to the inadequacy or absence of shelter facilities to the anticipated need (assuming a three day per week service) for stopovers and the associated hotel costs, meal costs, lost pay and separation from family. At the same time, objectors sought to have existing problems with the local services put on record: for example, only once a week may freight service, complicated by strict regulations governing the transport of fuel products, various policies governing the size of shipments and the absence of un-loading platforms at many of the small stops.

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*Sioux Lookout, Nakina, Longlac, Hornepayne.

**Rail Transport Committee, etc., Final Plan for Western Transcontinental Passenger Train Service, October, 1977.

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What becomes clear on a reading of the transcripts is that the concern is not so much with whether the service is transcontinental or local, rail or other, but rather for a mode of transportation that can adequately meet a diverse range of needs:

- convenience - frequency (e.g., same-day return) and scheduling (e.g., daylight hours).
- comfort
- affordability
- easy movement of people and goods (especially fuel products)
- reliability
- security, familiarity.

The CTC recently issued its order affecting passenger train service in Northern Ontario. Effective September 29, 1980, there will be transcontinental service six days per week, seven days in the peak (summer) season. A longer overall schedule during the off-peak season (i.e., most of the year) is intended to permit more frequent and longer local stops during daylight hours. Improved local services during high season should work to the advantage of both short-haul users and through passengers. Details of this decision are summarized in Table 2. Excerpts from the order itself, together with the Government of Ontario's December, 1979 brief to the CTC, are attached as Appendix 2.

On first glance at least, the CTC decision appears to respond to many of the issues raised throughout the public hearings. There has been little media attention though, so the reactions of users will have to be evaluated as the plan is put into effect.

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TABLE 2

A SUMMARY OF RECENT CTC DECISIONS
AFFECTING PASSENGER RAIL SERVICE
IN NORTHERN ONTARIO*

	<u>Existing Service</u>	<u>Effective Sept. 1980</u>
A. Transcontinental	6 d/wk.	6 d/wk., off-peak, with longer schedule to allow local scheduled stops
		7 d/wk., peak
	Bus transfer between Capreol and Sudbury	No bus transfer
B. Local	3 d/wk., Capreol- Nakina	3 d/wk., peak only, Capreol-Hornepayne
	2 d/wk., Winnipeg- Sioux Lookout (mixed passenger freight)	2 d/wk., daytime service, Winnipeg- Armstrong
	1 d/wk., peak Winnipeg-Farlane	same
	6 d/wk., peak and off-peak, Sudbury- White River	6 d/wk., peak only; off-peak, 6 d/wk transcontinental, Sudbury-White River

*Canadian Transport Commission, Railway Transport Committee, Orders No. R-30914, R-30915, R-30916, May 29, 1980, and No. R-31079, July 3, 1980.

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It should also be noted that the CTC is recommending what it sees as a minimum level of service. Without revealing the basis for this determination of need, the Commission goes on to suggest that an augmented service might be desirable and that "the concept of involving provincial and local authorities and organizations in the financing of regional services such as those between Sudbury, Capreol and Winnipeg be considered". As yet, the Government of Ontario has not commented on this suggestion.

V. CONCLUSIONS

- . Most of the northern rail communities have existed for many years; they remain permanent settlements with stable populations.
- . The Ontario government has confirmed the existence of these and other small (unorganised) communities through a number of policy and programme initiatives e.g., the Isolated Communities Assistance Fund and The Local Services Boards Act, 1979, both administered by the Ministry of Northern Affairs.
- . An analysis of the provision of rail services to the north's small and dependent communities requires a social and psychological perspective as well as an economic one.
- . Rail may well be just one of several ways to meet the transportation and employment needs identified in this paper. For now, however, it is the basic mode, and one deeply woven into the social fabric of many communities. In the absence of other actions to meet the transportation needs of the small and isolated communities, the introduction of even minor changes in rail service could have major local impacts.

APPENDIX 1

RECREATION FACILITIES
— recreation field

ALLANWATER

In the early 1920s, the population was over 200 as a result of a large sawmill operation. When the operation ceased, a number of workers and their families remained in the area.

LOCATION

latitude/longitude 50N14 90W12
district of Thunder Bay
located 45 kilometres east of Savant Lake
on the Canadian National Railway line

POPULATION

50 (1979 estimate)
languages spoken are English, Ojibway
and Cree

COMMUNITY CONTACTS

Local Roads Board
nil

Community Leaders
Mr. Thomas Carmody
General Delivery
Allanwater, Ontario P0V 1A0
telephone number requires operator
assistance
telephone Dryden 1 ring 31

Mr. Norman Anderson
General Delivery
Allanwater, Ontario P0V 1A0
no telephone

Mr. George Belmore
General Delivery
Allanwater, Ontario P0V 1A0
no telephone

UCANO Representative
nil

GOVERNMENT CONTACT

Mr. Phil Mostow
Ministry of Northern Affairs
200 Beaver Street
Ignace, Ontario P0T 1T0
(807) 934-2260

MEMBERS OF PARLIAMENT

M.P. Jack Stokes
M.P. John Reid

BASIC SERVICES

Electricity
diesel generated electricity for Canadian
National Railway homes only

Water
no water system

Sewerage
no sewage system

Solid Waste Disposal
nil

HOUSING

— 11 habitable homes
— no Ontario Housing units or mobile
home parks

EMPLOYMENT

— major employers are Canadian
National Railway and local tourist
camps

STORES, BUSINESSES AND FINANCIAL INSTITUTIONS

food and supplies are available at
Savant Lake and banking services
are available in either Ignace or Sioux
Lookout

SCHOOLS
Elementary
1 public school

Secondary
students board in Sioux Lookout

CHURCHES

1 Full Gospel church
1 Anglican church

COMMUNICATIONS

Canada Post Office
Allanwater, Ontario P0V 1A0

Telephone
Bell Canada

Newspapers
1 weekly from Dryden and 3 dailies from
Thunder Bay and Winnipeg are
available regularly

Radio Stations Received
CBQ-AM (CBC Northern Network)

Television Stations Received
not available

TRANSPORTATION

Bus Service
available in Savant Lake

Railway Service
Canadian National Railway

Air Service
available in Savant Lake and local
emergency landing strip available
for light aircraft

SERVICES

Fire Protection
no fire protection
Police Protection
Ontario Provincial Police
Ignace Detachment

MEDICAL AND SOCIAL SERVICES

— hospital and ambulance service are
available in Sioux Lookout and
Armstrong
— social services are available in
Thunder Bay

TOURIST FACILITIES

2 tourist camps

RECREATION FACILITIES

— outdoor skating rink
— prime hunting and fishing area

ARMSTRONG

*Armstrong came into existence in the
early 1900s as a result of the railway
expansion. Its primary importance
then was as a divisional point for the
Canadian National Railway and it has
remained an important railway centre
since. During World War II and in the
late 1940s Armstrong also became a key
military base until the military's depar-
ture in 1974.*

LOCATION

latitude/longitude 50N18 89W02
district of Thunder Bay
located 250 kilometres north of Thunder
Bay on Highway 527

POPULATION

500 (1979 estimate)
language spoken is English

COMMUNITY CONTACTS

Local Roads Board
Mr. Keith Boomhower, Chairman
Armstrong Local Roads Board
Armstrong, Ontario P0T 1A0
telephone number requires operator assistance
telephone Armstrong 583

Community Clubs

Mr. John Perrott, Chairman
Armstrong Development Corporation
see above address

UCANO Representative

Mr. John Perrott
see above address

GOVERNMENT CONTACT

Mr. Francesco Morelli
Ministry of Northern Affairs
'03 Main Street
Geraldton, Ontario P0T 1M0
(807) 854-0266

MEMBERS OF PARLIAMENT

M.P. Jack Stokes
M.P. Robert Andras

BASIC SERVICES

Electricity
Ontario Hydro

Water

private wells

Sewerage

private septic tanks

Solid Waste Disposal

Ministry of Natural Resources site
located 4.8 kilometres north of town-
ship

HOUSING

- 122 habitable dwellings
- little rental accommodation
- no Ontario Housing units or mobile home parks

EMPLOYMENT

major employers are Great West
Timber Limited, Canadian
National Railway, Ministry of
Natural Resources and Ontario
Provincial Police

**STORES, BUSINESSES AND
FINANCIAL INSTITUTIONS**

2 general stores
1 liquor store
1 service station
2 restaurants
financial institutions are available in
Thunder Bay

SCHOOLS

Elementary
1 public school

Secondary

students board in Thunder Bay

CHURCHES

1 Roman Catholic Mission

COMMUNICATIONS

Canada Post Office
Armstrong, Ontario P0T 1A0
Telephone
Bell Canada

Newspapers

1 daily from Thunder Bay is available
regularly

Radio Stations Received

CBQ-AM (CBC Northern Network)
CKPR-AM

Television Stations Received

local television station (using taped
programming)

TRANSPORTATION

Bus Service
nil

Railway Service

Canadian National Railway

Air Service

two 3,700-foot paved airstrips but no
scheduled plane service

SERVICES**Fire Protection**

volunteer fire department (10-15 men)

Police Protection

Ontario Provincial Police
Armstrong Detachment

MEDICAL AND SOCIAL SERVICES

- zone hospital and ambulance service
in Sioux Lookout
- social services are available in
Thunder Bay

TOURIST FACILITIES

1 motel
2 summer resort lodges

RECREATION FACILITIES

- outdoor skating rink
- indoor curling rink (2 sheets
natural ice)
- baseball diamond
- movie shown twice weekly
- public library

ARNSTEIN

*Arnstein was settled at the turn of
the century with logging and small scale
farming as its prime source of revenue.
The community's economic base has
generally remained the same with
tourism generating a small amount of
employment on a seasonal basis.*

LOCATION

latitude/longitude 45N55 79W56
district of Parry Sound
located 58 kilometres west of
Trout Creek on Highway 522

POPULATION

120 (1979 estimate)
language spoken is English

COMMUNITY CONTACTS

Local Roads Board
Mr. William Berger, Chairman
Arnstein, Ontario P0H 1A0
(705) 757-2178

Community Leader

Ms. Myrna Wice, President
Argyle Development Association
Loring, Ontario P0H 1S0
(705) 757-3500

UCANO Representative

Mrs. Mac Bain
Loring, Ontario P0H 1S0
(705) 757-2106

GOVERNMENT CONTACT

Mr. Ernie Levis
Ministry of Northern Affairs
267 Main Street West
North Bay, Ontario P1B 2T8
(705) 472-3911

MEMBERS OF PARLIAMENT

M.P. Lorne Macack
M.P. Stan Darling

BASIC SERVICES

Electricity
Ontario Hydro

Water

individual wells

Sewerage

individual septic systems

Television Stations Received

CKNY
CHNBSolid Waste Disposal
dump available in the area

HOUSING

- privately owned dwellings
- no Ontario Housing units or mobile home parks

EMPLOYMENT

- major employers are the Odorizzi Lumber Company and local sawmills

STORES, BUSINESSES AND FINANCIAL INSTITUTIONS

- 1 general store
- 1 fuel supply outlet
- 1 garage and service station
- other stores are available in North Bay, and financial institutions are available in Powassan, North Bay and Callander

SCHOOLS

- Elementary students are bussed to Loring
- Secondary students are bussed to South River

CHURCHES

available in Port Loring and Powassan

COMMUNICATIONS

Canada Post Office
Port Loring, Ontario P0H 1Y0

Telephone

Bell Canada

Newspapers

1 daily from North Bay and 1 weekly from Burks Falls are available regularly

Radio Stations Received

CFCH-AM
CKAT-FM

CBC-FM (French and English)

AROLAND

*Aroland was inhabited at the turn of the century but very loosely organized.**With the railway expansion in the early 1900s and the establishment of the Arrow Land and Logging Company in 1933, Aroland became a more permanent**community. This company closed its operations in the early 1940s and**Kimberly-Clark began a major expansion program in the area during the late**1970s. Aroland has no legal status as a reserve or settlement but its residents**hold individual memberships with the Long Lake Band #58, Long Lake Band**#77, Fort Hope Band or Whitesand Band; the remaining 40 per cent are non-**status Indians. This community has no formal elections for chief and council,**however, they have an Indian Association.*

LOCATION

latitude/longitude 50N14 86W59
district of Thunder Bay

located 20 kilometres northwest of

Nakina on Highway 643

POPULATION

300 (1979 estimate)

languages spoken are English and Ojibway

COMMUNITY CONTACTS

Local Roads Board

nil

Community Clubs

Mr. John Theriault, President

Aroland Indian Association

Aroland via Nakina, Ontario P0T 1B0

(807) 329-5900

UCANO Representative

Mr. John Theriault

see above address

GOVERNMENT CONTACT

Mr. Francesco Morelli
Ministry of Northern Affairs
103 Main Street
Geraldton, Ontario P0T 1M0
(807) 854-0266

MEMBERS OF PARLIAMENT

M.P.P. Jack Stokes
M.P. Keith Penner

BASIC SERVICES

Electricity

Ontario Hydro

Water

4 wells dug by the Ministry of the Environment

Sewerage

no sewage system

Solid Waste Disposal

nil

HOUSING

— no general housing information available

— 8 Ontario Housing family units

EMPLOYMENT

— major employer is Kimberly-Clark Paper Company

STORES, BUSINESSES AND FINANCIAL INSTITUTIONS

1 food store

other stores and financial institutions are available in Nakina and Geraldton

SCHOOLS

Elementary

1 public school

Secondary

students are bussed to Geraldton

Sewerage
lagoon

Solid Waste Disposal
site located 2 kilometres distant

HOUSING
— 20 homes owned by Boise Cascade Canada Limited
— no mobile home parks available or Ontario Housing Corporation homes

EMPLOYMENT

— major employer is Boise Cascade Canada Limited

STORES, BUSINESS AND FINANCIAL INSTITUTIONS

1 general store and 2 businesses in Red Lake Road
1 credit union and 1 bank (summers only) in Vermilion Bay

SCHOOLS

Elementary students are bussed to Vermilion Bay
Secondary students are bussed to Dryden

CHURCHES

available in Vermilion Bay

COMMUNICATIONS

Canada Post Office
Camp Robinson, Ontario P0V 1H0

Telephone
Bell Canada

Newspapers

2 Winnipeg dailies and 1 Dryden weekly are available in Vermilion Bay

Radio Stations Received
CKDR-AM

Television Stations Received
CBWT (CBC affiliate)

TRANSPORTATION

Bus Service
available in Vermilion Bay

Railway Service
Canadian National Railway available in Red Lake Road

Air Service
available in Dryden

SERVICES

Fire Protection
volunteer fire brigade (20 volunteers)

Police Protection
Ontario Provincial Police
Vermilion Bay Detachment

MEDICAL AND SOCIAL SERVICES
available in Dryden

TOURIST FACILITIES

5 tourist camps

RECREATION

— prime fishing and hunting area

CARAMAT

Caramat was established in the early 1900s with the construction of the Canadian National Railway transcontinental service. Marathon Corporation, a subsidiary of American Can of Canada Limited established a logging depot at Caramat in the early 1950s, the same year the main woodland headquarters moved from Caramat to Camp 15. Caramat has remained the principal residential community for American Can employees.

LOCATION

latitude/longitude 49N37 86W09
district of Thunder Bay
located 56 kilometres southeast of Longlac on Highway 625

POPULATION

325 (1979 estimate)
languages spoken are English and French

COMMUNITY CONTACTS

Local Roads Board
nil

Community Club
Mrs. Madeline Belisle
Caramat Recreation Club
General Delivery
Caramat, Ontario P0T 1J0
telephone number requires operator assistance
telephone Caramat 841

UCANO Representative
Mrs. Madeline Belisle
see above address

GOVERNMENT CONTACT

Mr. Francesco Morelli
Ministry of Northern Affairs
103 Main Street
Geraldton, Ontario P0T 1M0
(807) 854-0266

MEMBERS OF PARLIAMENT

M.P. Jack Stokes
M.P. Keith Penner

BASIC SERVICES

Electricity
Ontario Hydro

Water

private wells

Sewerage

public system

Solid Waste Disposal

landfill site located 1.6 kilometres away

HOUSING

— approximately 85 family dwellings
— no rental accommodation, mobile home parks or Ontario Housing units

EMPLOYMENT

— major employers are American Can and Canadian National Railway

STORES, BUSINESSES AND FINANCIAL INSTITUTIONS

2 general stores
other stores and financial institutions are available in Longlac, Geraldton and Manitouwadge

SCHOOLS

Elementary
1 public school
Secondary students are bussed to Geraldton

CHURCHES

Roman Catholic and Lutheran services held in school weekly

COMMUNICATIONS

Canada Post Office
Caramat, Ontario P0T 1J0

Telephone

Bell Canada

Newspapers
not available

Radio Stations Received

CBQ-AM (CBC Northern Network)

Television Stations Received
Northern Access Network
CBC

TRANSPORTATION

Bus Service
available in Longlac

RECREATION FACILITIES

- outdoor skating rink
- prime hunting and fishing area

CRYSTAL FALLS

Crystal Falls was called Smoky Falls until 1920. Although it was originally a lumbering town, the community is more farming oriented now.

LOCATION

latitude/longitude 46N27 79W54
 district of Nipissing
 located 11 kilometres north of Sturgeon Falls on Highway 64

POPULATION

150 (1979 local resident's estimate)
 languages spoken are French and English

COMMUNITY CONTACTS

Local Roads Board
 Mr. Charles Campbell, Chairman
 Crystal Falls, Ontario P0H 1L0
 (705) 472-7900

Community Clubs
 nil

UCANO Representative

Mr. Gerry Violette
 Gogama, Ontario P0M 1W0
 (705) 894-2431

GOVERNMENT CONTACT

Mr. Dan Richard
 Ministry of Northern Affairs
 191 Main Street
 Sturgeon Falls, Ontario P0H 2G0
 (705) 753-2900

MEMBERS OF PARLIAMENT

M.P.P. Mike Belan
 M.P. Arnold Peters

BASIC SERVICES

Electricity
 Ontario Hydro

Water

private wells

Sewerage

private septic tanks

Solid Waste Disposal

Ministry of Natural Resources site

HOUSING

- all homes owned by occupants, no rental accommodation
- no Ontario Housing units or mobile home parks

STORES, BUSINESSES AND FINANCIAL INSTITUTIONS

1 store
 other stores and financial institutions are available in Sturgeon Falls

SCHOOLS

Elementary
 students are bussed to Field

Secondary

students are bussed to Sturgeon Falls

CHURCHES

1 Roman Catholic church

COMMUNICATIONS

Canada Post Office
 Crystal Falls, Ontario P0H 1L0
 Telephone
 Bell Canada

Newspapers

1 daily from North Bay and 1 weekly from Sturgeon Falls are available regularly

Radio Stations Received

CFCH-AM
 CKSO-AM
 CFBR-AM
 CHNO-AM

Television Stations Received

CKNC
 CFCH
 CKNY
 CKSO

TRANSPORTATION

Bus Service
 available in North Bay
Railway Service
 available in Sturgeon Falls and North Bay

Air Service
 available in Sturgeon Falls and North Bay

SERVICES

Fire Protection
 no fire protection

Police Protection

Ontario Provincial Police
 Sturgeon Falls Detachment

MEDICAL AND SOCIAL SERVICES

available in Sturgeon Falls

TOURIST FACILITIES

4 tourist outfitters

RECREATION FACILITIES

— outdoor rink

CHURCHES

1 Anglican church
 1 Roman Catholic church

COMMUNICATIONS

Canada Post Office
 Collins, Ontario P0V 1M0

Telephone

Bell Canada

Newspapers

2 dailies from Thunder Bay are available regularly

Radio Stations Received

CBC

Television Stations Received

not available

TRANSPORTATION

Bus Service
 nil

Railway Service

Canadian National Railway

Air Service

available in Armstrong

SERVICES

Fire Protection

no fire protection

Police Protection

Ontario Provincial Police
 Armstrong Detachment

MEDICAL AND SOCIAL SERVICES

— ambulance service available in Armstrong

— hospital, health unit and social services are available in Thunder Bay

TOURIST FACILITIES

nil

Finnmark, named after the Norwegian province, first served as a railway centre during the building of the Canadian Pacific Railway. The original settlers who arrived in the early 1900s were mostly Scandinavian. Prior to World War I, residents were engaged locally in farming and forestry but now most residents commute to Thunder Bay for employment.

LOCATION

latitude/longitude 48N35 89W45
district of Thunder Bay
located 52 kilometres west of Thunder Bay on the Canadian Pacific Railway line

POPULATION

60 (1979 estimate)
language spoken is English

COMMUNITY CONTACTS

Local Roads Board
Mrs. L. Erickson
Dawson Road, Goldie Roads Board
P.O. Box 60
R.R. 2
Kaministiquia, Ontario P0T 1X0
(807) 933-4417

Community Clubs

Ms. Margie Maxwell, Secretary
Four Way School Association
R.R. 2
Kaministiquia, Ontario P0T 1X0
(807) 933-4417

UCANO Representative

Mr. Alf Kivi
R.R. 2
Kaministiquia, Ontario P0T 1X0
(807) 933-4423

GOVERNMENT CONTACT

Mr. Bev Young
Ministry of Northern Affairs
140 South May Street
Thunder Bay, Ontario P7E 1B3
(807) 475-1425

MEMBERS OF PARLIAMENT

M.P.P. Jim Foulds
M.P. Robert Andras

BASIC SERVICES

Electricity

Ontario Hydro

Water

private wells

Sewerage

private septic tanks

Solid Waste Disposal

Ministry of Natural Resources site

HOUSING

- 25 single family dwellings
- little rental accommodation
- no Ontario Housing homes or mobile home parks

EMPLOYMENT

- major employers are Great Lakes Forest Products Limited with camps in the area and Inco Mines Limited in Shebandowan

STORES, BUSINESSES AND FINANCIAL INSTITUTIONS

1 service station
stores, financial institutions and other businesses are available in Thunder Bay

SCHOOLS

Elementary
1 public school

Secondary

students are bussed to Thunder Bay

CHURCHES

available in Kakabeka Falls

COMMUNICATIONS

Canada Post Office
Kaministiquia, Ontario P0T 1X0

Telephone

Bell Canada

Newspapers

2 dailies from Thunder Bay are available regularly

Radio Stations Received

CBQ-AM (CBC Northern Network)

CKPR-AM

CFPA-AM

CJSD-FM

Television Stations Received

CKPR

CHFD

TRANSPORTATION

Bus Service

Greyhound Bus Line provides service on flagstop basis on trans-Canada highway, 1½ kilometres away

Railway Service

available in Thunder Bay

Air Service

available in Thunder Bay

SERVICES

Fire Protection

no fire protection

Police Protection

Ontario Provincial Police
Shabaqua Detachment

MEDICAL AND SOCIAL SERVICES

available in Thunder Bay

TOURIST FACILITIES

nil

RECREATION FACILITIES

- baseball diamond and playground
- prime hunting and fishing area
- Kakabeka Falls Provincial Park is 26 kilometres away

FOLEYET

Foleyet was a railroad community, founded in 1915, which later became a forest products centre with a sawmill. The sawmill closed in 1973.

LOCATION

latitude/longitude 48N15 82W27
district of Sudbury
located on Highway 101, 100 kilometres west of Timmins

POPULATION

800 (1979 Foleyet Citizens Committee figure)
languages spoken are French and English

COMMUNITY CONTACTS

Local Roads Board

Mr. Jim Regan, Chairman
Foleyet Local Roads Board
Foleyet, Ontario P0M 1T0
(705) 899-2467

Community Clubs

Mr. Armand Robert
Foleyet Citizen's Committee
see address below

Foleyet Sportsmen Club

Foleyet Youth and Recreation Association

UCANO Representative

Mr. Armand Robert
Foleyet, Ontario P0M 1T0
(705) 899-2636

GOVERNMENT CONTACT

Mr. George Rhodes
Ministry of Northern Affairs
161 Sixth Avenue
Cochrane, Ontario P0L 1C0
(705) 272-4274

MEMBERS OF PARLIAMENT

M.P. P. René Brunelle
M.P. Keith Penner

BASIC SERVICES

Electricity
Ontario Hydro

Water
individual wells

Sewerage
private septic tanks

Solid Waste Disposal
Ministry of Natural Resources
site in township

HOUSING

— mostly farm houses
— no Ontario Housing units or
mobile home parks

EMPLOYMENT

— residents work in Cochrane area

**STORES, BUSINESSES AND
FINANCIAL INSTITUTIONS**
available in Cochrane

SCHOOLS

Elementary
both separate and public school students
are bussed to Cochrane

Secondary
students are bussed to Cochrane

CHURCHES

available in Cochrane

TOURIST FACILITIES

1 hotel
1 motel
3 lodges

RECREATIONAL FACILITIES

— Ivanhoe Provincial Park
— 1 gymnasium
— 1 community centre
— 1 Parish hall
— 1 community hall

FOURNIER

*Fournier was first settled as a
farming community between 1910 and
1920.*

LOCATION

latitude/longitude 49N01 81W15
district of Cochrane
located 3.2 kilometres west of
Cochrane on Highway 11

POPULATION

79 (1977 Local Roads Board estimate)
languages spoken are French and English

COMMUNITY CONTACTS

Local Roads Board
Mr. John Higgs, Secretary-Treasurer
Box 983
Cochrane, Ontario P0L 1C0
(705) 272-5654

Community Clubs
nil

UCANO Representative

Mr. Howard Farguhar
Box 81
Cochrane, Ontario P0L 1C0
(705) 272-5582

Secondary

students are bussed to Timmins

CHURCHES

1 Anglican church
1 Roman Catholic church

COMMUNICATIONS

Canada Post Office
Foleyet, Ontario P0M 1T0

Telephone
Bell Canada

Newspapers
1 daily from Timmins is available
regularly

Radio Stations Received
CKGB-AM (CBC affiliate)
CFCL-AM (French CBC affiliate)
CFTI-AM

Television Stations Received
CFCL (CBC affiliate)
CKSO

TRANSPORTATION

Bus Service
Ontario Northland Transportation
Commission

Railway Service

Canadian National Railway

Air Service
available in Timmins

SERVICES

Fire Protection
Foleyet Fire Brigade (20 men)

Police Protection

Ontario Provincial Police
Foleyet Detachment

MEDICAL AND SOCIAL SERVICES

— hospital, ambulance service and social
services are available in Timmins
— health unit in Chapleau

GOVERNMENT CONTACT

Mr. Robert Clark
Ministry of Northern Affairs
3 Birch Street
Chapleau, Ontario P0M 1K0
(705) 864-1515

MEMBERS OF PARLIAMENT

M.P. P. Floyd Laughren
M.P. Ray Chénier

BASIC SERVICES

Electricity
Ontario Hydro

Water

Canadian National water line
private wells

Sewerage
private septic systems

Solid Waste Disposal
Ministry of Natural Resources site

HOUSING

— 120 habitable dwellings
— 5 Ontario Housing units
— no mobile home parks

EMPLOYMENT

— Canadian National Railway is the
major local employer
— some residents work for timber
cutting operations

**STORES, BUSINESSES AND
FINANCIAL INSTITUTIONS**

1 garage
3 stores
financial institutions are available
in Timmins

SCHOOLS

Elementary
1 public school
1 separate school (bilingual)

UCANO Representative
nil

GOVERNMENT CONTACT

Mr. Francesco Morelli
Ministry of Northern Affairs
103 Main Street
Geraldton, Ontario P0T 1M0
(807) 854-0266

MEMBERS OF PARLIAMENT

M.P.P. Jack Stokes
M.P. Keith Penner

BASIC SERVICES

Electricity
Ontario Hydro

Water

private wells

Sewerage

private septic tanks

Solid Waste Disposal

Geraldton sanitary landfill site located
9.3 kilometres distant on Highway
11 and Hutchinson Lake site located
4.8 kilometres north on Highway 584
(summers only)

HOUSING

- 18 habitable dwellings
- no rental accommodation available
- no Ontario Housing units or mobile home parks

EMPLOYMENT

- major employers are Kimberly-Clark of Canada and Weldwood of Canada in Longlac and Nakina and various businesses in Geraldton

STORES, BUSINESSES AND FINANCIAL INSTITUTIONS

available in Geraldton

SCHOOLS

Elementary
students are bussed to Geraldton

Secondary
students are bussed to Geraldton

CHURCHES

various denominations are represented
in Geraldton

COMMUNICATIONS

Canada Post Office
Geraldton, Ontario P0T 1M0

Telephone

Bell Canada

Newspapers

1 daily from Thunder Bay and 1 weekly
from Geraldton are available regularly

Radio Stations Received

CBQ-AM (CBC Northern Network)

Television Stations Received

CBLT (CBC affiliate)

TRANSPORTATION

Bus Service

available in Geraldton

Railway Service

available in Longlac and Nakina

Air Service

available in Geraldton

SERVICES

Fire Protection

no fire protection

Police Protection

Ontario Provincial Police
Geraldton Detachment

MEDICAL AND SOCIAL SERVICES

available in Geraldton

TOURIST FACILITIES

MacLeod Provincial Trailer Park
(complete facilities)

RECREATION FACILITIES

available in Geraldton

GOVERNMENT CONTACT

Mr. Robert Clark
Ministry of Northern Affairs
3 Birch Street
Chapleau, Ontario P0M 1K0
(705) 864-1515

MEMBERS OF PARLIAMENT

M.P.P. Floyd Laughren
M.P. Ray Chénier

BASIC SERVICES

Electricity
Ontario Hydro

Water

Canadian National Railway water
system and private wells

Sewerage

private septic systems

Solid Waste Disposal

Ministry of Natural Resources
site

HOUSING

- 170 privately owned homes
- no Ontario Housing units or mobile home parks

EMPLOYMENT

- major employers are Ministry of Natural Resources, Ministry of Transportation and Communications, E.B. Eddy Forest Products Limited and Canadian National Railway

GOGAMA

Gogama originated as a railway community in 1920. During the 1940s, three sawmills started operating locally, and logging flourished. All have since closed.

LOCATION

latitude/longitude 47N40 81W43
district of Sudbury
located at the end of Highway 661,
100 kilometres south of Timmins

POPULATION

700 (1979 UCANO East figure)
languages spoken are French and English

COMMUNITY CONTACTS

Local Roads Board
Mr. Marcel Constant, Chairman
Gogama, Ontario P0M 1W0
(705) 894-2737

Community Clubs

Mr. Marcel Constant, President
Gogama Citizen's Committee
see address above

UCANO Representative

Mr. Gerry Violette
Gogama, Ontario P0M 1W0
(705) 894-2233

STORES, BUSINESSES AND FINANCIAL INSTITUTIONS

1 general store
2 grocery stores
1 hardware store
2 service stations
2 restaurants
1 hotel
3 motels
other stores and financial institutions are available in Timmins

SCHOOLS

Elementary
1 public school
1 separate school (bilingual)

Secondary
students are bussed to Timmins

CHURCHES

1 Roman Catholic church
1 Anglican church
1 Presbyterian church

COMMUNICATIONS

Canada Post Office
Gogama, Ontario P0M 1W0

Telephone
Bell Canada

Newspapers
1 daily from Timmins is available regularly

Radio Stations Received
CKGB-AM (CBC affiliate)
CBC-AM
CFCL-AM (French CBC affiliate)
CKSO-AM

Television Stations Received
CFCL (CBC affiliate)
CKSO

TRANSPORTATION

Bus Service
Ontario Northland Transportation Commission

Railway Service
Canadian National Railway

Air Service
Gogama Airways
Lodge Airways
Minisnakwa
Derry-Air

one 1,500-foot sand and gravel strip and one 2,200-foot gravel air-strip with no radio aids

SERVICES

Fire Protection

Gogama Fire Protection Team (21 men)

Police Protection

Ontario Provincial Police
Gogama Detachment

MEDICAL AND SOCIAL SERVICES

— hospital in Timmins
— local ambulance service
— health unit and social services are available in Sudbury

TOURIST FACILITIES

4 hotels-motels
2 lodges

RECREATION FACILITIES

— 1 library
— 1 gymnasium

GOWGANDA

Gowganda was established around 1909 when silver was discovered in the area. The population was estimated to be between ten and twenty-five thousand in the boom years. Tourism is now the economic base of Gowganda.

LOCATION

latitude/longitude 47N39 80W46
district of Timiskaming
located 112 kilometres west of New Liskeard on Highway 560

POPULATION

110 (1979 estimate provided by a resident)
languages spoken are English and French

COMMUNITY CONTACTS

Local Roads Board

nil

Community Clubs

Mrs. Antoinette Trajkowicz, Secretary
Gowganda Community Recreation Association
General Delivery

Gowganda, Ontario P0J 1J0
telephone number requires operator assistance
telephone Gowganda 3431

UCANO Representative

Mr. David Ford
General Delivery
Gowganda, Ontario P0J 1J0
telephone number requires operator assistance
telephone Gowganda 3171

GOVERNMENT CONTACT

Mr. Jack Sayer
Ministry of Northern Affairs
310 Whitewood Avenue
New Liskeard, Ontario P0J 1P0
(705) 647-7391

MEMBERS OF PARLIAMENT

M.P. Ed Havrot
M.P. Arnold Peters

BASIC SERVICES

Electricity
Ontario Hydro

Water
private wells
Sewerage
private systems
Solid Waste Disposal
Ministry of Natural Resources site

HOUSING

— 130 habitable dwellings
— 3 rental units
— no Ontario Housing units or mobile home parks

EMPLOYMENT

— residents work for government agencies on a seasonal basis

STORES, BUSINESSES AND FINANCIAL INSTITUTIONS

1 general store
2 service stations
1 restaurant
mobile bank visits community regularly the 1st Friday of every month

SCHOOLS

Elementary
1 public school

Secondary
students are bussed to New Liskeard

CHURCHES

available in Elk Lake

COMMUNICATIONS

Canada Post Office
Gowganda, Ontario P0J 1J0

Telephone
Northern Telephone

Newspapers

1 weekly from New Liskeard and 2 dailies from Kirkland Lake and North Bay are available regularly

GOVERNMENT CONTACT

Mr. Art Glassford
Ministry of Northern Affairs
444 Queen Street East
Sault Ste. Marie, Ontario P6A 1Z7
(705) 254-6623

MEMBERS OF PARLIAMENT

M.P.P. Bud Wildman
M.P. Maurice Foster

BASIC SERVICES

Electricity
Great Lakes Power Corporation

Water
private wells

Sewerage
private septic tanks

Solid Waste Disposal
Ministry of Natural Resources site

HOUSING

- 537 habitable dwellings
- no rental accommodation
- 5 mobile home parks
- no Ontario Housing units

EMPLOYMENT

- residents work in Sault Ste. Marie

STORES, BUSINESSES AND FINANCIAL INSTITUTIONS

- 1 general store
- 1 confectionery
- 4 restaurants
- 1 auto body repair shop
- 1 camper sales
- 1 saw mill
- 1 canoe manufacturing plant
- other stores and financial institutions are available in Sault Ste. Marie

SCHOOLS

- 1 elementary
- 1 public school

Secondary

students are bussed to Sault Ste. Marie

CHURCHES

Anglican and Roman Catholic services held in public school

COMMUNICATIONS

Canada Post Office
Sault Ste. Marie, Ontario P6A 5K7

Telephone
Bell Canada

Newspapers

1 daily from Sault Ste. Marie is available regularly

Radio Stations Received

CFYN-AM
CJIC-AM
CKCY-AM

Television Stations Received

CFYN
CJIC
CKCY

TRANSPORTATION

Bus Service
Ontario Northland Transportation Commission
Greyhound Bus Line

Railway Service
available in Sault Ste. Marie

Air Service
available in Sault Ste. Marie

SERVICES

Fire Protection
Ministry of Natural Resources in Sault Ste. Marie

Police Protection

Ontario Provincial Police
Sault Ste. Marie Detachment

MEDICAL AND SOCIAL SERVICES

available in Sault Ste. Marie

TOURIST FACILITIES

2 hotels-motels
tourist cabins

RECREATION FACILITIES

- 1 school auditorium
- hiking, fishing, skiing, swimming
- 1 mobile library from Sault Ste. Marie
- ski hill

Community Clubs

nil

UCANO Representative

Mr. Endel Igarik
see address above

GOVERNMENT CONTACT

Mr. Francesco Morelli
Ministry of Northern Affairs
103 Main Street
Geraldton, Ontario P0T 1M0
(807) 854-0266

MEMBERS OF PARLIAMENT

M.P.P. Jack Stokes
M.P. Keith Penner

BASIC SERVICES

Electricity
Ontario Hydro

Water

private wells

Sewerage

private septic tanks

Solid Waste Disposal

Ministry of Natural Resources site

HOUSING

- 60 habitable dwellings
- no Ontario Housing units or mobile home parks

EMPLOYMENT

- major employers are American Can of Canada Limited and the Canadian National Railway

STORES, BUSINESSES AND FINANCIAL INSTITUTIONS

- 1 general store
- other stores and financial institutions are available in Manitowadge

HILLSPORT

Hillsport began as a result of local railway construction in the early 1900s. It developed into a permanent community in the 1950s with the expansion of American Can of Canada Limited (Woodlands Divisions).

LOCATION

latitude/longitude 49N27 85W33
district of Thunder Bay.
located 70 kilometres north of Manitowadge on the Canadian National Railway line

POPULATION

84 (1979 estimate)
language spoken is English

COMMUNITY CONTACTS

Local Roads Board
Mr. Endel Igarik
General Delivery
Hillsport, Ontario P0T 1S0
telephone number requires operator assistance
telephone Hillsport 21

STORES, BUSINESSES AND FINANCIAL INSTITUTIONS

2 general stores
1 liquor store
2 service stations
credit union van from Dryden visits weekly
other stores and financial institutions are available in Sioux Lookout

SCHOOLS

Elementary
1 public school with grades 1 to 6
grades 7 and 8 students are bussed to Sioux Lookout

Secondary
students are bussed to Sioux Lookout

CHURCHES

1 Roman Catholic church
1 Protestant church
1 Mennonite church

COMMUNICATIONS

Canada Post Office
Hudson, Ontario P0V 1X0

Telephone
Bell Canada

Newspapers
1 local weekly and 2 Winnipeg dailies as well as 2 weeklies from Sioux Lookout and Dryden are available regularly

Radio Stations Received
CBQ-AM (CBC Northern Network)
CBLS (Sioux Lookout broadcasts to CBQ-AM in Hudson on weekdays only)

Television Stations Received
CBW (CBC affiliate)

TRANSPORTATION

Bus Service
weekly service to and from Dryden is available

UCANO Representative

Mr. Bill Wilson
Highway 664
Hudson, Ontario P0V 1X0
(807) 582-3297

GOVERNMENT CONTACT

Mr. Ron Willis
Ministry of Northern Affairs
2nd Floor, Provincial Building
Box 147
Sioux Lookout, Ontario P0V 2T0
(807) 737-1318

MEMBERS OF PARLIAMENT

M.P. Leo Bernier
M.P. John Reid

BASIC SERVICES

Electricity
Ontario Hydro

Water
communal system

Sewerage
private septic tanks

Solid Waste Disposal
Ministry of Natural Resources site

HOUSING

— 151 habitable dwellings
— a ten-room hotel offers rental accommodation on a year-round basis
— 12 Ontario Housing units
— no mobile home parks available

EMPLOYMENT

— major employer is McKenzie Forest Products

TOURIST FACILITIES

nil

RECREATION FACILITIES

— curling rink

HUDSON

Hudson was named after a surveyor who worked for the railway.

LOCATION

latitude/longitude 50N05 92W10
district of Kenora
located 24.1 kilometres west of Sioux Lookout on Highway 664

POPULATION

583 (1979 enumerator's figure)
language spoken is English

Community Contacts

Local Roads Board
Mr. Gary Hyslop, Secretary-Treasurer
4th Avenue
Hudson, Ontario P0V 1X0
(807) 582-3233

Community Leaders
Mr. Walter Glens, President
Chamber of Commerce
Box 81
Hudson, Ontario P0V 1X0
(807) 582-3372

Community Clubs
Golden Ages Club
Pine Grove Rebekah Lodge

SCHOOLS

Elementary
1 public school
Secondary
students are bussed to Manitouwadge

CHURCHES

available in Manitouwadge and Carleton Place

COMMUNICATIONS

Canada Post Office
Hillsport, Ontario P0T 1S0

Telephone
Bell Canada

Newspapers
1 weekly from Manitouwadge and 1 daily from Thunder Bay are available regularly

Radio Stations Received
CBQ-AM (CBC Northern Network)

Television Stations Received
CBLT (CBC affiliate)

TRANSPORTATION

Bus Service
available in Longlac

Railway Service
Canadian National Railway

Air Service
available in Geraldton

SERVICES

Fire Protection
no fire protection

Police Protection
Ontario Provincial Police
Manitouwadge Detachment

MEDICAL AND SOCIAL SERVICES

available in Manitouwadge

Railway Service
Canadian National Railway

Air Service
one local charter air carrier and scheduled service is available in Sioux Lookout

SERVICES

Fire Protection
volunteer fire brigade

Police Protection
Ontario Provincial Police
Sioux Lookout Detachment

MEDICAL AND SOCIAL SERVICES

available in Sioux Lookout

TOURIST FACILITIES

2 hotels-motels

RECREATION FACILITIES

- baseball diamond
- outdoor hockey rink
- ski-hill with rope tow
- curling rink (3 sheets)
- community hall
- Ojibway Provincial Park located on Highway 72 (30.4 kilometres south-east of Hudson)
- prime hunting, fishing and canoeing area

HUNTA

Hunta was first established as a railway siding for settlers who arrived in the area.

LOCATION

latitude/longitude 49N06 81W16
district of Cochrane
located 32 kilometres northwest of Cochrane on Highway 11

POPULATION

105 (1979 local resident's estimate)
languages spoken are English and French

COMMUNITY CONTACTS

Local Roads Board
Mrs. Evelyn Shier, Secretary-Treasurer
General Delivery
Hunta, Ontario P0L 1P0
(705) 272-6314

Community Clubs
Mrs. Irene Blackburn, Secretary
Hunta Community Club
Hunta, Ontario P0L 1P0
(705) 272-6304

UCANO Representative

Mrs. Irene Blackburn
see address above

GOVERNMENT CONTACT

Mr. George Rhodes
Ministry of Northern Affairs
161 Sixth Avenue
Cochrane, Ontario P0L 1C0
(705) 272-4274

MEMBERS OF PARLIAMENT

M.P.P. René Brunelle
M.P. Keith Penner

BASIC SERVICES

Electricity
Ontario Hydro

Water
private wells

Sewerage
private septic tanks

Solid Waste Disposal
Ministry of Natural Resources site

HOUSING

- 25 habitable dwellings owned by occupants
- no Ontario Housing units or mobile home parks

EMPLOYMENT

-- major employers are B & F Shier, Ontario government offices in Cochrane and Abitibi Pulp and Paper Company Limited

STORES, BUSINESSES AND FINANCIAL INSTITUTIONS
available in Cochrane

SCHOOLS

Elementary
students are bussed to Cochrane

Secondary

students are bussed to Cochrane

CHURCHES

1 Mennonite church
other denominations are represented in Cochrane

COMMUNICATIONS

Canada Post Office
Hunta, Ontario P0L 1P0

Telephone
Northern Telephone

Newspapers
1 daily from Timmins, 1 weekly from Cochrane as well as 2 Toronto dailies are available regularly

Radio Stations Received

CKAP-AM
CFCL-AM (French CBC affiliate)
CKGB-AM

Television Stations Received

CFCL (CBC affiliate)
CKSO
CKRN (French)

TRANSPORTATION

Bus Service
available in Cochrane

Railway Service
available in Cochrane

Air Service
available in Timmins and Cochrane

SERVICES

Fire Protection
no fire protection
Police Protection
Ontario Provincial Police
Cochrane Detachment

MEDICAL AND SOCIAL SERVICES

available in Cochrane

TOURIST FACILITIES

nil

RECREATION FACILITIES

-- Greenwater Provincial Park

HURKETT

Hurkett, called Wolfe Siding until about 1910, was an active Canadian Pacific Railway stop serving the farmers, loggers and commercial fishermen of the area.

LOCATION

latitude/longitude 48N50 88W29
district of Thunder Bay
located 70 kilometres east of Thunder Bay on Highway 17

POPULATION

300 (1979 estimate)
language spoken is English

MEMBERS OF PARLIAMENT

M.P.P. Patrick Reid
M.P. Paul McCrae

BASIC SERVICES

Electricity
Ontario Hydro

Water
some private wells

Sewerage
private septic tanks

Solid Waste Disposal
solid waste disposal site available in area

HOUSING

— approximately 9 habitable dwellings
— no Ontario Housing units or mobile home parks

EMPLOYMENT

— major employer is the Ministry of Natural Resources Fire Base

STORES, BUSINESSES AND FINANCIAL INSTITUTIONS

available in Atikokan

SCHOOLS

Elementary
students are bussed to Atikokan

Secondary
students are bussed to Atikokan

CHURCHES

available in Atikokan

COMMUNICATIONS

Canada Post Office
Atikokan, Ontario P0T 1C0

Telephone
Bell Canada

Newspapers

1 weekly from Atikokan and dailies from Thunder Bay, Winnipeg and Toronto are available regularly

Radio Stations Received

CBQ-AM (CBC Northern Network)

Television Stations Received

CBWT (CBC affiliate)
CKPR (CBC affiliate)
CHFD (CTV affiliate)

TRANSPORTATION

Bus Service
available in Atikokan

Railway Service
available in Thunder Bay

Air Service
available in Atikokan

SERVICES

Fire Protection
fire protection provided by the Ministry of Natural Resources

Police Protection
Ontario Provincial Police
Atikokan Detachment

MEDICAL AND SOCIAL SERVICES

available in Atikokan

TOURIST FACILITIES

1 wilderness canoe outfitter

RECREATION FACILITIES

— Quetico Provincial Park

Oba

Oba was founded in the early 1920s as a junction point between the Algoma Central and Canadian National Railways.

LOCATION

latitude/longitude 49N04 84W06
district of Algoma
located 76.8 kilometres south of Hearst at the junction of Highway 583 and Oba Road

POPULATION

75 (1979 local resident's estimate)
language spoken is English

COMMUNITY CONTACTS

Local Roads Board
nil

Community Leader
Mr. Jim Donald, local resident
Oba, Ontario P0M 2P0
telephone number unlisted

UCANO Representative
Mr. Gerry Violette
Gogama, Ontario P0M 1W0
(705) 894-2233

GOVERNMENT CONTACT

Mr. Mel Mousseau
Ministry of Northern Affairs
Northern Seasons Motel
915 George Street
Hearst, Ontario P0L 1N0
(705) 362-4358

MEMBERS OF PARLIAMENT

M.P. Bud Wildman
M.P. Keith Penner

BASIC SERVICES

Electricity
supplied by Delco System

Water
private wells

Sewerage
private septic tanks

Solid Waste Disposal
dump in the area

HOUSING

— 20 habitable dwellings
— no Ontario Housing units or mobile home parks

EMPLOYMENT

— major employers are Canadian National Railway and Poulin Lumber Company

STORES, BUSINESSES AND FINANCIAL INSTITUTIONS

2 general stores
other stores and financial institutions are available in Hearst and Hornepayne

SCHOOLS

Elementary
students are bussed to Hornepayne

Secondary
students board in Hearst

CHURCHES

available in Hearst and Hornepayne

COMMUNICATIONS

Canada Post Office
Oba, Ontario P0M 2P0

Telephone
Bell Canada

Newspapers

2 weeklies from Hearst and 1 weekly from Kapuskasing are available regularly

Radio Stations Received CFCL-AM (French CBC affiliate) CBC-AM	POPULATION 100 (1979 estimate) language spoken is English	EMPLOYMENT — residents are employed on local farms	SERVICES Fire Protection volunteer fire brigade (16 men)
Television Stations Received CFCL (CBC affiliate)	COMMUNITY CONTACTS Local Roads Board Mrs. Eleanor MacLeod R.R. 1 Bruce Mines, Ontario P0R 1C0 (705) 736-2262 Community Clubs Mr. Gene Charron Havilah Improvement Association R.R. 1 Bruce Mines, Ontario P0R 1C0 (705) 736-2306 UCANO Representative Mr. Gene Charron see address above	STORES, BUSINESSES AND FINANCIAL INSTITUTIONS available in Bruce Mines and Sault Ste. Marie	Police Protection Ontario Provincial Police Thessalon Detachment
TRANSPORTATION Bus Service available in Hearst Railway Service Canadian National Railway Air Service charter air service is available in Hornepayne and White River		SCHOOLS Elementary students are bussed to Bruce Mines Secondary students are bussed to Desbarats	MEDICAL AND SOCIAL SERVICE; available in Thessalon and Sault Ste. Marie
SERVICES Fire Protection volunteer fire brigade (20 people) Police Protection Ontario Provincial Police Hearst and Hornepayne Detachments	GOVERNMENT CONTACT Ms. Cathy Watters Ministry of Northern Affairs 13 Lawton Street Blind River, Ontario P0R 1B0 (705) 356-2226	CHURCHES 1 United church	TOURIST FACILITIES nil
MEDICAL AND SOCIAL SERVICES available in Hearst	MEMBERS OF PARLIAMENT M.P. P. Bud Wildman M.P. Maurice Foster	COMMUNICATIONS Canada Post Office R.R. 1 Bruce Mines, Ontario P0R 1C0 Telephone Bell Canada Newspapers 1 weekly from Bruce Mines and 1 daily from Sault Ste. Marie are available regularly	RECREATION FACILITIES — school hall

OXDRIFT

Oxdrift was established in the late 1890s by a group of settlers interested in developing the farming potential of the area. Farming remains an important activity.

LOCATION

latitude/longitude 49N59 92W58
district of Kenora
located 10 kilometres west of Dryden on Highway 17

POPULATION

623 (1978 Ministry of Revenue figure)
language spoken is English

Radio Stations Received CFCL-AM (French CBC affiliate) CBC-AM	POPULATION 100 (1979 estimate) language spoken is English	EMPLOYMENT — residents are employed on local farms	SERVICES Fire Protection volunteer fire brigade (16 men)
Television Stations Received CFCL (CBC affiliate)	COMMUNITY CONTACTS Local Roads Board Mrs. Eleanor MacLeod R.R. 1 Bruce Mines, Ontario P0R 1C0 (705) 736-2262 Community Clubs Mr. Gene Charron Havilah Improvement Association R.R. 1 Bruce Mines, Ontario P0R 1C0 (705) 736-2306 UCANO Representative Mr. Gene Charron see address above	STORES, BUSINESSES AND FINANCIAL INSTITUTIONS available in Bruce Mines and Sault Ste. Marie	Police Protection Ontario Provincial Police Thessalon Detachment
TRANSPORTATION Bus Service available in Hearst Railway Service Canadian National Railway Air Service charter air service is available in Hornepayne and White River		SCHOOLS Elementary students are bussed to Bruce Mines Secondary students are bussed to Desbarats	MEDICAL AND SOCIAL SERVICE; available in Thessalon and Sault Ste. Marie
SERVICES Fire Protection volunteer fire brigade (20 people) Police Protection Ontario Provincial Police Hearst and Hornepayne Detachments	GOVERNMENT CONTACT Ms. Cathy Watters Ministry of Northern Affairs 13 Lawton Street Blind River, Ontario P0R 1B0 (705) 356-2226	CHURCHES 1 United church	TOURIST FACILITIES nil
MEDICAL AND SOCIAL SERVICES available in Hearst	MEMBERS OF PARLIAMENT M.P. P. Bud Wildman M.P. Maurice Foster	COMMUNICATIONS Canada Post Office R.R. 1 Bruce Mines, Ontario P0R 1C0 Telephone Bell Canada Newspapers 1 weekly from Bruce Mines and 1 daily from Sault Ste. Marie are available regularly	RECREATION FACILITIES — outdoor rink

OPHIR

LOCATION

latitude/longitude 46N28 83W44
district of Algoma
located 21 kilometres north of Bruce Mines and Highway 17 and at the junction of Highways 638 and 561

HOUSING

-- primarily farms
-- no Ontario Housing units or mobile home parks

GOVERNMENT CONTACT

Mr. Joe Kaliska
Ministry of Northern Affairs
Box 430
408 Atwood Avenue
Rainy River, Ontario POW 1L0
(807) 852-3287

MEMBERS OF PARLIAMENT

M.P.P. Patrick Reid
M.P. John Reid

BASIC SERVICES

Electricity
Ontario Hydro

Water
private water systems

Sewerage
private septic tanks

Solid Waste Disposal
nil

HOUSING

- 25 habitable dwellings owned by occupants
- no Ontario Housing units or mobile home parks

EMPLOYMENT

- residents are self-employed farmers or private pulpwood contractors

STORES, BUSINESSES AND FINANCIAL INSTITUTIONS

1 general store
1 service station
financial institutions are available in.
Rainy River, Emo and Fort Frances

SCHOOLS

Elementary
students are bussed to Rainy River

Secondary

students are bussed to Rainy River
and grade 13 students board in Fort Frances

CHURCHES

available in Rainy River

COMMUNICATIONS

Canada Post Office
Sleeman, Ontario POW 1M0

Telephone
Bell Canada

Newspapers

2 weeklies from Rainy River and Fort Frances and 2 dailies from Winnipeg are available regularly

Radio Stations Received

CFOB-AM
CBC-AM
CKY-AM
CFRW-AM
CKRC-AM
CKSB-AM (French)

Television Stations Received
CBWT (CBC affiliate)

TRANSPORTATION

Bus Service
available in Sleeman

Railway Service

passenger service available in Winnipeg and freight service available in Rainy River

Air Service
available in Fort Frances

SERVICES

Fire Protection
no fire protection

Police Protection
Ontario Provincial Police
Rainy River Detachment

MEDICAL AND SOCIAL SERVICES

- Red Cross hospital, ambulance service and health unit office in Rainy River
- social services are available in Rainy River and Fort Frances

TOURIST FACILITIES

available in Lake of the Woods area

RECREATION FACILITIES

- prime hunting in area
- Lake of the Woods Provincial Park
- other facilities available in Rainy River

QUIBELL

Quibell was established in 1912. Residents, at that time, were interested mainly in the area's farming potential.

LOCATION

latitude/longitude 49N57 93W27
district of Kenora
located 4 kilometres west of Red Lake
Road on Secondary Highway 609

POPULATION

115 (1978 Ministry of Revenue figure)
language spoken is English

COMMUNITY CONTACTS

Local Roads Board
Mrs. G. Rob, Secretary
Wabigoon and Redvers West Local Roads Board
P.O. Box 207
Vermilion Bay, Ontario P0V 2V0
(807) 227-5442

Community Clubs

nil

UCANO Representative

Mr. John Rob
P.O. Box 207
Vermilion Bay, Ontario P0V 2V0
(807) 227-5442

GOVERNMENT CONTACT

Mr. Brian England
Ministry of Northern Affairs
18 King Street
Dryden, Ontario P8N 1B1
(807) 223-5231

MEMBERS OF PARLIAMENT

M.P.P. Leo Bernier
M.P. John Reid

BASIC SERVICES

Electricity
Ontario Hydro

Water

private systems

Sewerage

private systems

Solid Waste Disposal

Ministry of Natural Resources site

HOUSING

- 67 habitable dwellings
- little rental accommodation
- no Ontario Housing units or mobile home parks

EMPLOYMENT

- major employers are Reed Paper Limited in Red Lake Road, a private sawmill in the area and local farms

STORES, BUSINESSES AND FINANCIAL INSTITUTIONS

- 1 general store
- 1 gas station and car repair shop
- 1 credit union and summer bank in Vermilion Bay

SCHOOLS

- Elementary students are bussed to Vermilion Bay
- Secondary students are bussed to Dryden

CHURCHES

available in Vermilion Bay

COMMUNICATIONS

Canada Post Office
Vermilion Bay, Ontario P0V 2V0

Telephone
Bell Canada

Newspapers

2 Winnipeg dailies and 1 Dryden weekly are available in Vermilion Bay

Radio Stations Received
CKDR-AM

Television Stations Received
CBWT (CBC affiliate)

TRANSPORTATION

Bus Service
available in Vermilion Bay

Railway Service
available in Red Lake Road

Air Service
available in Dryden

SERVICES

Fire Protection
Vermilion Bay Volunteer Fire
Department

Police Protection
Ontario Provincial Police
Vermilion Bay Detachment

MEDICAL AND SOCIAL SERVICES

available in Dryden

TOURIST FACILITIES

2 tourist camps

RECREATION FACILITIES

— prime hunting and fishing area

RAITH

In the early 1900s Raith was an active railway centre for the Canadian National and the Canadian Pacific railways: it served as a turn-a-round point and fuel depot for the steam locomotives.

LOCATION

latitude/longitude 48N50 89W56
district of Thunder Bay
located 97 kilometres west of Thunder Bay on Highway 17

POPULATION

125 (1979 estimate)
language spoken is English

COMMUNITY CONTACTS

Local Roads Board
nil

Community Clubs
nil

UCANO Representative
Ms. Irene Plumber
Raith, Ontario P0T 2N0
telephone number requires operator assistance
telephone Raith 18

GOVERNMENT CONTACT

Mr. Bev Young
Ministry of Northern Affairs
140 South May Street
Thunder Bay, Ontario P7E 1B3
(807) 475-1425

MEMBERS OF PARLIAMENT

M.P. Jack Stokes
M.P. Robert Andras

BASIC SERVICES

Electricity
Ontario Hydro

Water
private wells

Sewerage
private septic tanks

Solid Waste Disposal
Ministry of Natural Resources site

HOUSING

- 20 habitable single family residences, privately owned on land leased from Abitibi Paper Company Limited
- no Ontario Housing units or mobile home parks

EMPLOYMENT

- major employers are Canadian Pacific Railway, Canadian National Railway and Great Lakes Forest Products Limited

STORES, BUSINESSES AND FINANCIAL INSTITUTIONS

- 1 general store with gasoline pumps and restaurant
- other retail establishments and financial institutions are available in Thunder Bay

SCHOOLS

- Elementary students are bussed to Finmark
- Secondary students board in Thunder Bay

CHURCHES

available in Upsala

COMMUNICATIONS

Canada Post Office
Raith, Ontario P0T 2N0

Telephone
Bell Canada

Newspapers

2 dailies from Thunder Bay and 1 weekly from Upsala are available regularly

Radio Stations Received

CBQ-AM (CBC Northern Network)
CKPR-AM

CJSD-FM

Television Stations Received
CKPR

CHFD

TRANSPORTATION

- Bus Service
Greyhound Bus Line
- Railway Service
Canadian National Railway
- Air Service
available in Thunder Bay

LOCATION
latitude/longitude 49N59 94W24
district of Kenora
located 34 kilometres north of Kenora
on Highway 666

POPULATION
170 (1979 estimate)
language spoken is English

COMMUNITY CONTACTS
Local Roads Board
Mrs. Pat Martin, Secretary-Treasurer
Redditt Local Roads Board
Redditt, Ontario P0X 1M0
telephone number unlisted

Community Leader
Mr. Harold McDonald
Redditt, Ontario P0X 1M0
telephone numbers require operator
assistance
telephone Redditt 2391 (home)
telephone Redditt 2111 (business)

Community Club
Ms. M. Hurly, President
Redditt Community Club
Redditt, Ontario P0X 1M0
telephone number requires operator
assistance
telephone Redditt 2141

UCANO Representative
Ms. M. Hurly
see address above

GOVERNMENT CONTACT
Mr. Ken Pride
Ministry of Northern Affairs
12 Main Street South
Box 5050
Kenora, Ontario P9N 3X9
(807) 468-5548

MEMBERS OF PARLIAMENT
M.P. P. Leo Bernier
M.P. John Reid

Television Stations Received
CHNB
CKNY
CRTV

TRANSPORTATION
Bus Service
available in North Bay

Railway Service
available in North Bay

Air Service
available in North Bay

SERVICES
Fire Protection
organized fire brigade

Police Protection
Ontario Provincial Police
North Bay Detachment

MEDICAL AND SOCIAL SERVICES
available in North Bay

TOURIST FACILITIES
1 trailer park
camping facilities

RECREATION FACILITIES
— skating rink
— mobile library visits community
— other facilities are available
in North Bay

REDDITT
*Redditt was originally the centre of a
farm homesteading area and a Canadian
National Railway station and repair
depot.*

HOUSING
— all homes are owned by occupants
— 1 mobile home park with 12 homes
— no Ontario Housing units

EMPLOYMENT
— residents work in North Bay

**STORES, BUSINESSES AND
FINANCIAL INSTITUTIONS**
2 general stores
1 sporting goods store
1 service station
financial institutions are available in
North Bay

SCHOOLS
Elementary
1 public school
separate school students are bussed
to North Bay

Secondary
students are bussed to North Bay

CHURCHES
1 United Church
1 Kingdom Hall
other denominations are represented
in North Bay

COMMUNICATIONS
Canada Post Office
Redditt, Ontario P0H 2A0

Telephone
Bell Canada

Newspapers
1 daily from North Bay is available
regularly

Radio Stations Received
CFCH-AM
CKAT-AM
CRTV-AM

COMMUNITY CONTACTS
Local Roads Board
Mr. Robert Ford, Chairman
Redditt, Ontario P0H 2A0
(705) 663-2356

Community Clubs
Mr. James Leck, President
PHELPS Veterans Club
Redditt, Ontario P0H 2A0
(705) 663-2395

Mr. Myles Peters, President
Redditt Cultural and Recreation
Association
Redditt, Ontario P0H 2A0
no telephone

Ms. Marilyn Hummel, President
PHELPS Women's Institute
Redditt, Ontario P0H 2A0
(705) 663-2628

UCANO Representative
Mrs. Jean Thompson
Redditt, Ontario P0H 2A0
(705) 663-2276

GOVERNMENT CONTACT
Mr. Ernie Levis
Ministry of Northern Affairs
267 Main Street West
North Bay, Ontario P1B 2T8
(705) 472-3911

MEMBERS OF PARLIAMENT
M.P. Mike Bolan
M.P. Jean-Jacques Blais

BASIC SERVICES
Electricity
Ontario Hydro

Water
private wells

Sewerage
private septic tanks

Solid Waste Disposal
dump site located in the township

BASIC SERVICES

Electricity
Ontario Hydro

Water
public water system by gravity from
Armstrong Lake and some private
systems

Sewerage
private septic tanks

Solid Waste Disposal
Ministry of Natural Resources site

HOUSING

— 86 habitable dwellings
— no Ontario Housing units or mobile
home parks

EMPLOYMENT

— major employers are Northern
Servicentre (local machine shop)
and the Canadian National Rail-
way
— other residents work in Kenora

**STORES, BUSINESSES AND
FINANCIAL INSTITUTIONS**

1 store which includes a liquor outlet
financial institutions are available in
Kenora

SCHOOLS

Elementary
students are bussed to Kenora

Secondary
students are bussed to Kenora

CHURCHES

1 Roman Catholic church

COMMUNICATIONS

Canada Post Office
Redditt, Ontario P0X 1M0

Telephone
Bell Canada

Newspapers
3 dailies from Winnipeg and Kenora
are available regularly

Radio Stations Received
CBC-AM

CKY
CJRL-AM

Television Stations Received
CBWT (CBC affiliate)

TRANSPORTATION

Bus Service
available in Kenora

Railway Service
Canadian National Railway

Air Service
available in Kenora

SERVICES

Fire Protection
volunteer fire brigade

Police Protection
Ontario Provincial Police
Kenora Detachment

MEDICAL AND SOCIAL SERVICES

— hospital, ambulance and health unit
services are available in Kenora
— Ministry of Community and Social
Services office in Keewatin

TOURIST FACILITIES

1 hotel
1 campground
4 resorts

RECREATION FACILITIES

— outdoor skating rink
— indoor curling rink (2 sheets of ice)
— baseball diamond
— good hunting and fishing area

RED LAKE ROAD

*The community of Red Lake Road was
established around a pulp hauling road in
1942. Construction of Highway 105 from
Vermilion Bay to Red Lake instigated the
community's growth. During this time,
Red Lake Road became a busy rail
shipping terminal for supplies,
machinery and equipment required by
the gold mines in the area.*

LOCATION

latitude/longitude 49N58 93W22
district of Kenora
located 16 kilometres north of Vermilion
Bay on Highway 105

POPULATION

241 (1978 Ministry of Revenue figure)
language spoken is English

COMMUNITY CONTACTS

Local Roads Board
Mrs. Elizabeth Chaval
Wabigoon Southeast #2096 Local Roads
Board
P.O. Box 208
Vermilion Bay, Ontario P0V 2V0
(807) 227-5421

Community Clubs
nil

UCANO Representative

Mrs. Joyce Blair
Red Lake Road, Ontario P0V 2N0
(807) 227-5410

GOVERNMENT CONTACT

Mr. Brian England
Ministry of Northern Affairs
18 King Street
Dryden, Ontario P8N 1B1
(807) 223-5231

MEMBERS OF PARLIAMENT

M.P. Leo Bernier
M.P. John Reid

BASIC SERVICES

Electricity
Ontario Hydro

Water
private systems

Sewerage
private septic tanks

Solid Waste Disposal

Ministry of Natural Resources site

HOUSING

— 51 habitable dwellings
— little rental accommodation available
— no Ontario Housing units or mobile
home parks

EMPLOYMENT

— major employer is Reed Paper
Limited (Colenso Lumber Divi-
sion) located 4 kilometres south of
the community

**STORES, BUSINESSES AND
FINANCIAL INSTITUTIONS**

1 grocery store
1 restaurant
1 oil bulk station
financial institutions are available in
Vermilion Bay

SCHOOLS

Elementary
students are bussed to Vermilion Bay

Secondary
students are bussed to Dryden

CHURCHES

1 Baptist church

RIVER VALLEY

River Valley began in 1890 as a headquarters for lumber camps. In 1913 the Canadian National Railway built a railway and station in the community.

LOCATION

latitude/longitude 46N35 80W11
district of Nipissing
located 15 kilometres northwest of
Field, on Highway 539

POPULATION

400 (1979 local resident's estimate)
languages spoken are French and English

COMMUNITY CONTACTS

Local Roads Board
Mr. Isidore Carré
River Valley, Ontario P0H 2C0
(705) 758-6868

Community Clubs

Mr. Maurice Giroux, President
River Valley Citizen's Association
River Valley, Ontario P0H 2C0
(705) 758-6868

UCANO Representative

Mr. Gerry Violette
Gogama, Ontario P0M 1W0
(705) 894-2431

Mr. Raymond Descoteaux, Chief
Volunteer Fire Brigade
River Valley, Ontario P0H 2C0
(705) 758-6793

GOVERNMENT CONTACT

Mr. Dan Richard
Ministry of Northern Affairs
191 Main Street
Sturgeon Falls, Ontario P0H 2G0
(705) 753-2900

COMMUNICATIONS

Canada Post Office
Vermilion Bay, Ontario P0V 2V0

Telephone

Bell Canada

Newspapers

1 Dryden weekly and 2 Winnipeg
dailies are available in Vermilion
Bay

Radio Stations Received

CKDR-AM

Television Stations Received

CBWT (CBC affiliate)

TRANSPORTATION

Bus Service

Excel Coach Line

Railway Service

Canadian National Railway

Air Service

available in Dryden

SERVICES

Fire Protection

Vermilion Bay Volunteer Fire
Department

Police Protection

Ontario Provincial Police
Vermilion Bay Detachment

MEDICAL AND SOCIAL SERVICES

available in Dryden

TOURIST FACILITIES

1 trailer park (with hook-ups)

RECREATION FACILITIES

— available in Vermilion Bay
— prime hunting and fishing area

MEMBERS OF PARLIAMENT

M.P.P. Mike Bolan

M.P. Arnold Peters

BASIC SERVICES

Electricity

Ontario Hydro

Water

private wells

Sewerage

private septic tanks

Solid Waste Disposal

landfill site located 3.6 kilometres
distant

HOUSING

— 105 privately owned homes

— no rental accommodation

— no Ontario Housing units or mobile
home parks

EMPLOYMENT

— residents are self-employed loggers

STORES, BUSINESSES AND FINANCIAL INSTITUTIONS

2 general stores

1 service station

other stores and financial institutions
are available in Sturgeon Falls

SCHOOLS

Elementary

students are bussed to Sturgeon Falls

Secondary

students are bussed to Sturgeon Falls

CHURCHES

1 Roman Catholic church

COMMUNICATIONS

Canada Post Office
River Valley, Ontario P0H 2C0

Telephone

Bell Canada

Newspapers

1 daily from North Bay and 1 weekly
from Sturgeon Falls are available
regularly

Radio Stations Received

CFCH-AM

CKSO-AM

CFBR-AM

CHNO-AM

CBC-AM (French)

Television Stations Received

CKNC

CFCH

CKWY

CKSO

CBC (French)

TRANSPORTATION

Bus Service

Nipissing Bus Line

Railway Service

available in Sturgeon Falls

Air Service

available in North Bay

SERVICES

Fire Protection
volunteer fire brigade

Police Protection

Ontario Provincial Police
Sturgeon Falls Detachment

MEDICAL AND SOCIAL SERVICES

available in Sturgeon Falls

TOURIST FACILITIES

13 tourist camps

RECREATION FACILITIES

— skating rink

— public library

dance hall

swimming pool

SAVANT LAKE

Savant Lake was originally a refueling depot for the Canadian National Railway. Since then, logging and mining operations have created an increase in population.

LOCATION

latitude/longitude 50N14 90W40
district of Thunder Bay
located on Highway 599 at the junction
of the Canadian National Railway
line, 113 kilometres north of Ignace

POPULATION

250 (1979 estimate)
language spoken is English

COMMUNITY CONTACTS

Local Roads Board
Mr. Al Best, Chairman
General Delivery
Savant Lake, Ontario P0V 2S0
telephone number requires operator
assistance
telephone 47 via Dryden

Community Clubs

Mr. Gerry Melanson, Chairman
General Delivery
Savant Lake, Ontario P0J 2S0
telephone number requires operator
assistance
telephone 43 via Dryden

UCANO Representative

Ms. Janet Johnson
General Delivery
Savant Lake, Ontario P0J 2S0
telephone number requires operator
assistance
telephone 924 via Dryden

GOVERNMENT CONTACT

Mr. Phil Mostow
Ministry of Northern Affairs
200 Beaver Street
Ignace, Ontario P0T 1T0
(807) 934-2260

Radio Stations Received
CFCL-AM (French CBC affiliate)

Television Stations Received
CFCL (CBC affiliate)
CBOFT (French CBC affiliate)
CBC Northern Network

TRANSPORTATION

Bus Service
Ontario Northland Railway provides
bus service in Hearst
Railway Service
Canadian National Railway and Algoma
Central Railway are available
in Hearst

Air Service
norOntair is available in
Kapuskasing

SERVICES

Fire Protection
no fire protection
Police Protection
Ontario Provincial Police
Hearst Detachment

MEDICAL AND SOCIAL SERVICES

— hospital, ambulance service, health
unit, and social services are
available in Hearst

TOURIST FACILITIES

1 hotel-motel

RECREATION FACILITIES

available in Hearst

MEMBERS OF PARLIAMENT

M.P.P. Jack Stokes
M.P. John Reid

BASIC SERVICES

Electricity
Ontario Hydro

Water

community wells and some private wells
sewerage
some private septic fields
Solid Waste Disposal
waste disposal site nearby

HOUSING

— 25 privately owned homes
— 8 Ontario Housing units
— no mobile home parks

EMPLOYMENT

— major employers are Great Lakes
Paper Company, Great West Tim-
ber and the Canadian National
Railway

STORES, BUSINESSES AND FINANCIAL INSTITUTIONS

2 grocery stores
1 liquor store
2 service stations
financial institutions are available in
Dryden and Ignace

SCHOOLS

Elementary
1 public school
Secondary
students board in Sioux Lookout

CHURCHES

1 Roman Catholic church
1 Mennonite church
1 Pentecostal church

COMMUNICATIONS

Canada Post Office
Savant Lake, Ontario P0V 2S0
Telephone
Bell Canada
Newspapers
2 weeklies from Ignace and Dryden as
well as 3 dailies from Thunder Bay and
Winnipeg are available regularly

Radio Stations Received

CBQ-AM (CBC Northern Network)
Television Stations Received
CBW (CBC affiliate)

TRANSPORTATION

Bus Service
Lovenuck-Lockwood Bus Line
Railway Service
Canadian National Railway

Air Service

charter service (summers only) is
available locally
scheduled air service is available in
Dryden and Sioux Lookout

SERVICES

Fire Protection
no fire protection
Police Protection
Ontario Provincial Police
Ignace Detachment

MEDICAL AND SOCIAL SERVICES

— nearest hospital located at Sioux
Lookout 90 kilometres distant
— social services are available in Dryden
and Ignace

TOURIST FACILITIES

1 motel - hotel
tourist camps in the area

APPENDIX 2

CANADIAN TRANSPORT COMMISSION

RAILWAY TRANSPORT COMMITTEE

IN THE MATTER OF the applications filed by the Corporation of the Town of Sioux Lookout, Transport 2000, and Mr. John Rodriguez, M.P., for the review of certain portions of the Railway Transport Committee's Final Plan of Western Transcontinental Passenger Train Service.

IN THE MATTER OF public hearings into the said applications on December 4, 1979, December 6, 1979 and December 7, 1979.

File No. 49893-2-3

IN THE MATTER OF the reconsideration pursuant to Section 260 of the Railway Act of the applications for discontinuance of the following passenger train services, in order to determine whether they should be maintained or discontinued in whole or in part between:

Winnipeg and Sioux Lookout (Trains Nos. 286, 287)

Capreol and Nakina (Trains Nos. 675, 676)

Hornepayne and Manitouwadge (Trains Nos. 269, 270)

SUBMISSION OF THE GOVERNMENT OF ONTARIO

Toronto, Ontario.

November 27, 1979.

INTRODUCTION

1. The Province of Ontario welcomes the opportunity to make a submission once again to the Railway Transport Committee concerning the re-examination of certain portions of the Final Plan For Western Transcontinental Passenger Train Service. It is hoped that the participation of the public and of the many interest groups during these three scheduled hearings will assist the Committee in its implementation of a passenger train service to meet the social and economic needs of the area between Capreol and Winnipeg.
2. It has already been resolved that this part of Ontario requires and is dependent upon an adequate modern passenger rail service. The purpose of these hearings as we view it is to determine what form this service should take the frequency, schedule, points served, equipment provided and marketing approach. The Government of Ontario hopes that these hearings will enable the CTC and VIA Rail to produce a plan that will result in a service which is satisfactory to the year-round residents of the affected communities.
3. The Government of Ontario will not be making specific recommendations on the level of service required. The Province does has several concerns. However, we believe that the recommended service-routing, frequency, service level and points

3. Con't.

served should be determined by the CTC based upon the evidence presented at the hearings. It is our view that the principle evidence of the specific needs for railway passenger service in this area can best be given directly to the CTC by the people most immediately affected.

4. The amended notice of hearing issued by the CTC under date 20th November, 1979 indicates that the Committee will be considering not only the Final Plan of the Western Transcontinental Passenger Train Service but also other applications for the discontinuance of passenger train services. The shortness of notice in regard to these latter services precludes any thorough analysis of the implications of the applications and we do not intend at this time to make any submission to the Committee in regard to them. However, in general terms the statements of the Government Ontario in regard to passengers trains made in the remainder of this submission would apply equally to these additional services.

ONTARIO CONCERNS

5. A large number of communities do not have access to roads. Until fairly recently the road system was not well developed at all. The first Canadian road linking Thunder Bay with Southern Ontario (Highway 11) was not completed through Ontario

5. Con't.

until after World War II. The Trans-Canada Highway (Number 17) was not completed north of Lake Superior until 1964. Still today the majority of points served by rail are not served by road or any other scheduled mode.

6. The rail service provides an essential link for shopping, medical and social trips. Rail passenger service is also an important transportation mode for the recreation and tourist industry in this area.

7. From the outset of the Federal Minister of Transport's Directives to the CTC issued in 1976 the Province welcomed the opportunity to provide input into the formulation of a more efficient, more responsive network of passenger rail services.

Ontario, of all the Provinces, has within its borders the greatest amount of passenger rail service. This is commensurate with our population and the vast land space within our borders.

8. The Government of Ontario participated in all the hearings held in Ontario for the review of the western transcontinental in 1976. We also requested and were granted an additional Ontario hearing site in Thunder Bay. The request was made because of our feeling that the people who

8. Con't.

wish to make submissions should be able to do so without having to travel excessive distances.

9. The concerns we expressed in our submission during these hearings in Ottawa, Toronto, Sudbury and Thunder Bay have not changed. These are restated below as they pertain to the subject of this hearing.

First: Canada must retain a transcontinental passenger train service on a permanent basis.

Second: The provision of inter-city passenger rail service is a Federal Government responsibility. The decisions made by the CTC should not transfer financial responsibility to the Provincial Treasury.

Third: Ontario is supportive of the rationalization process in general. Our definition of the word 'rationalization' is a service better designed to suit the needs of Canadians as they perceive these needs. It must not merely be a cost-cutting exercise but one whose primary goal is the development of services which are modern, innovative and suited to the needs of the Canadian public as they see them.

9. Con't.

Fourth: In the event that transcontinental service through the Province of Ontario is confined to one line of railway then some other form of rail service must be provided on the other line.

Fifth: This service on the other line should be a good, modern, service using appropriate equipment, tailored specifically to meet the unique needs of the people and the communities on the route in the most appropriate manner.

10. Ontario made recommendations to the CTC that the Final Plan develop a re-designed service through Northern Ontario. This we stated requires convenient access and schedules. Such a service, if it is well designed, could have the ability to serve the needs of localities en route perhaps in a better manner than the transcontinental. This service should also recognize the need for connections to the transcontinental at Winnipeg and Sudbury. Ontario believes a number of relevant issues will be addressed at these hearings. The submissions made by individuals and organizations to the Committee we believe will lead to recommended service which meets the social and economic needs of the area.

SUMMARY

11. The Government of Ontario is concerned about the adequacy of passenger rail service provided to its citizens between Capreol and the Manitoba border. Ontario does not at this time have specific recommendations to make on the details of this service. This we believe should be undertaken by the CTC based upon the evidence presented by local representatives who are best able to articulate them.
12. In conclusion, Ontario wishes to thank the CTC for conducting this review and expresses the hope that an adequate and efficient service is instituted to provide the citizens of this valuable area of the province the basic transportation service required to meet the social and economic needs.



Canadian Transport
Commission

Commission canadienne
des transports

RAILWAY TRANSPORT COMMITTEE

COMITÉ DES TRANSPORTS PAR CHEMIN DE FER

ORDER NO. R-30914

ORDONNANCE N° R-30914

May 29, 1980

Le 29 mai 1980

IN THE MATTER OF the applications filed by the Corporation of the Town of Sioux Lookout, Transport 2000 Canada and Mr. J. Rodriguez, M.P., for a review of certain portions of the Railway Transport Committee's Final Plan for Western Transcontinental Passenger-Train Service.

RELATIVE aux requêtes présentées par la municipalité de Sioux Lookout, Transport 2000 Canada et M. J. Rodriguez, député, en vue d'étudier certaines parties du plan définitif pour le service de l'Ouest des trains transcontinentaux de voyageurs du Comité des transports par chemin de fer.

Files Nos. 49467.62.1
49893-2-3

Dossiers n^{os} 49467.62.1
49893-2-3

UPON hearing the matters at public hearings chaired by Commissioner J.F. Walter, at Sioux Lookout, Ontario, December 4, 1979; Hornepayne, Ontario, December 6, 1979 and Capreol, Ontario, December 7, 1979; and

APRES audition des requêtes lors d'audiences publiques présidées par le commissaire J.F. Walter, à Sioux Lookout (Ontario) le 4 décembre 1979; à Hornepayne (Ontario) le 6 décembre 1979 et à Capreol (Ontario) le 7 décembre 1979; et

UPON receiving the Report of Commissioner Walter, a copy of which is attached as Schedule "A".

APRES réception du rapport du commissaire Walter, dont une copie figure à l'annexe A.

THE COMMITTEE HEREBY ORDERS THAT:

LE COMITE PAR LA PRESENTE ORDONNE CE QUI SUIT:

1. The Report of Commissioner J.F. Walter is adopted by the Committee as submitted.
2. The Report shall be published on the same date as the publication of this Order.
3. VIA Rail Canada Inc., the Canadian National Railways and Canadian Pacific Limited, who will be jointly responsible for providing this passenger-train service, shall implement the off-peak service described on pages 39, 40 and 41 of the attached Report under the heading, "RECOMMENDED OFF-PEAK SERVICE", on September 29, 1980.

1. Est adopté, par le Comité, le rapport du commissaire J.F. Walter, tel que soumis.
2. Le rapport devra être publié à la même date que la présente ordonnance.
3. VIA Rail Canada Inc., les Chemins de fer Nationaux du Canada et Canadien Pacifique Limitée qui se partageront la responsabilité d'offrir ce service de trains de voyageurs, devront mettre en application le service régulier décrit aux pages 39, 40 et 41 du rapport ci-joint sous la rubrique "SERVICE REGULIER RECOMMANDE", à compter du 29 septembre 1980.

ORDER NO. R-30914

ORDONNANCE N^O R-30914

4. VIA Rail Canada Inc., the Canadian National Railways and Canadian Pacific Limited shall implement the peak season service described on pages 40, 41 and 42 of the attached Report under the heading, "RECOMMENDED PEAK SEASON SERVICE", effective with the summer season of 1981, on such date as VIA Rail Canada Inc. may choose to begin operating transcontinental Trains Nos. 3 and 4 across CN's Northern Ontario line to supplement the year-round service provided by transcontinental Trains Nos. 1 and 2.
5. The necessary work to enable rail access between Sudbury and Capreol shall be carried out as soon as possible, with the presently-operated bus transfer to be continued in the interim.
6. As long as the basic patterns and frequencies of service ordered are adhered to, the actual days of operation, scheduled times and operational aspects shall be determined by VIA Rail Canada Inc.
4. VIA Rail Canada Inc., les Chemins de fer Nationaux du Canada et Canadien Pacifique Limitée devront mettre en application le service de pointe décrit aux pages 40, 41 et 42 du rapport ci-joint sous la rubrique "SERVICE DE POINTE RECOMMANDE", à partir de l'été 1981 à la date que VIA Rail Canada Inc. choisira pour exploiter les trains transcontinentaux n^{os} 3 et 4 sur la ligne du CN dans le nord de l'Ontario afin de compléter le service assuré à longueur d'année par les trains transcontinentaux n^{os} 1 et 2.
5. Les travaux nécessaires afin de permettre l'accès aux trains entre Sudbury et Capréol devront être entrepris le plus tôt possible, tout continuant d'offrir, à titre provisoire, le service de correspondance par autocars.
6. En autant que les tableaux et les fréquences de base des services recommandés seront respectés, les jours réels d'exploitation, les heures fixes et les caractéristique d'exploitation devront être déterminés par VIA Rail Canada Inc.

(signed)

(signature)

G.E. MacDonald

Acting Secretary
Railway Transport Committee

Secrétaire suppléant
Comité des transports par chemin de fer

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is intended to result in a more acceptable pattern of service and, therefore, there is no question of discontinuance involved. However, staff have costed several options on a comparative basis, as discussed below in the "Recommendations" section.

TRAFFIC

Passenger handling data for the first five months of operation of trains 7 and 8 between Capreol and Winnipeg are shown in appendices V and VI. The average passenger handlings per trip for coach and sleeping car passengers for the period between November, 1979, and March, 1980, were: between Winnipeg and Armstrong, 59 passengers; between Armstrong and Hornepayne, 35 passengers; and between Hornepayne and Capreol, 37 passengers. The average monthly handlings ranged from a high of 80 on the Winnipeg-Armstrong route segment in December to a low of 20 on the Armstrong-Hornepayne route segment in November. All the handling figures cited include revenue, pass and infants travelling on trains 7 and 8.

CONCLUSIONS

I have considered the alternative transportation services, the probable future needs of the area, and the various proposals presented at the hearings. The following was determined from the analysis.

Alternative Transportation Services

Rail

Alternative passenger-train service has been provided along the following stretches of the line:

- i) Capreol and Nakina, tri-weekly by trains 675 and 676;
- ii) Sioux Lookout and Winnipeg, twice-weekly by mixed trains 286 and 287; and
- iii) Farlane and Winnipeg, once-weekly during the summer months by trains 190 and 191.

In addition, the community of Oba is served tri-weekly in winter and six-times-per-week in summer by Algoma Central Railway Sault Ste. Marie-Hearst trains. Nakina also is linked to Hearst by means of a VIA Rail/CN tri-weekly mixed train, and Sioux Lookout is linked with Thunder Bay by a VIA Rail/CN twice-weekly mixed train.

Highway

Most major intermediate communities are joined by road to either the Trans-Canada Highway or Highway 11. Examples are Sioux Lookout, Nakina, Longlac, Hornepayne, Gogama and Foleyet. Many communities, however, have no road access.

Bus

The following communities are linked by scheduled bus services:

- i) Winnipeg and Capreol (Sudbury), via Thunder Bay (Greyhound Lines of Canada);
- ii) Winnipeg and Red Lake Road, via Kenora (Excel Coach Lines, with Greyhound);

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- iii) Winnipeg and Longlac, via Thunder Bay (Greyhound or Grey Goose Lines);
- iv) Winnipeg or Capreol (Sudbury) and Foleyet, Palomar or Kukatush, via Wawa (Ontario Northland Transportation Commission, with Greyhound); and
- v) Winnipeg or Capreol and Gogama, via Sudbury (ONTC, with Greyhound).

In most cases, service is daily but requires at least one change-of-bus enroute. Because routings are indirect, only those communities specifically mentioned above are served.

Air

The following communities are linked by scheduled air services:

- i) Winnipeg or Toronto and Sioux Lookout, five-days-per-week via Dryden (Austin Airways, with Nordair); and
- ii) Capreol (Sudbury) or Toronto and Hornepayne, six-days-per-week via Sault Ste. Marie (NorOntair, with Air Canada or Nordair).

At least one change-of-plane is required in both cases.

Probable Future Transportation Needs of the Area

Most of the Capreol-Winnipeg route has no parallel roads. Those communities with roads are joined in most cases to the major east-west highways lying to the south or north by means of access roads.

While some passengers now using trains 7 and 8 could gain access to communities along the CN line by private automobile, bus, air, or other rail

services, such access normally would be much slower, costlier and inconvenient. For almost all inter-community travel between points along the line, there is really no alternative to the Capreol-Winnipeg train other than the local trains described above. And, for a distance of 400 kilometres between Nakina and Sioux Lookout, there is not even an alternative local rail service.

RECOMMENDATIONS

I have considered all of the evidence presented at the hearings or sent directly to the Committee by mail. On the basis of the evidence, I make the following comments and recommendations.

The passenger-train services in this area should be provided in a cost-effective manner, taking into account the actual and potential traffic and the role of passenger-train service. The Final Plan is a good plan as it concerns overall transcontinental service between Montréal, Toronto and Vancouver. The decision to operate transcontinental service on the CP line across Northern Ontario was reasonable, considering the small population of the area. The route chosen was the best in terms of population centres served and marketability. The question, therefore, is really one of local service. It should be pointed out that the Committee recently approved VIA Rail's proposal to lengthen Montréal/Toronto-Vancouver schedules, a change which will shift the overnight portion of trains 7 and 8 from the Capreol-Armstrong route segment to the Armstrong-Winnipeg segment.

There is no question that passenger-train service plays an important role in this area. As the "Summary of Evidence" section above suggests, the area depends upon such services for a variety of reasons. The problem is that the traffic generated by the communities themselves is relatively small. In past years, the locally-generated traffic between Capreol and Winnipeg was not

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sufficient in itself to support full-service, transcontinental trains, nor is there any evidence to suggest that the situation will change. In similar areas of the country having remote stretches of railway, daily service normally is confined to the summer season, if it exists at all; for example: Jasper-Prince Rupert, tri-weekly during the off-peak and daily in summer; Lillooet-Prince George, tri-weekly, year-round; Thompson-Churchill, tri-weekly full-service trains, supplemented by once-weekly, mixed-train service, year-round; Sault Ste. Marie-Hearst, tri-weekly during the off-peak and six-days-per-week in summer; and, Hervey Jct-Senneterre, six-days-per-week during the off-peak and daily in summer.

I have examined the issue of emergency medical evacuation. I have come to the conclusion that less-than-daily passenger-train service may cause some inconvenience but not additional suffering or death. Air ambulance services have taken over the role formerly played by the railways. As for the other functions performed by the passenger trains, I am not convinced that less-than-daily service would cause suffering or hardship, although I do acknowledge that it would result in some inconvenience.

Furthermore, I feel that passengers travelling in and out of the area by means of connections with the "Canadian" and "Super Continental" would not be seriously inconvenienced by less-than-daily service. I believe that direct transcontinental connections should be maintained at both Sudbury and Winnipeg, as called for by the Final Plan. I do not feel, however, that the Winnipeg-Capreol-Sudbury link should operate to and from Toronto.

The operating cost simply would be too high, given the small amount of traffic generated locally between Winnipeg and Sudbury.

In my recommendations below, I describe several alterations to the Final Plan that should result in a relatively convenient and cost-effective service between Winnipeg and Sudbury. I feel that this level of service is the minimum that VIA Rail should operate.

I would like to point out that the schedules shown in tables 1 and 2 below are recommended schedules. The departure and arrival times are based on existing or recent schedules and are given in some detail only to show the basic pattern of service, be it overnight or daytime. Where service is to be less than daily, the days of operation shown in the tables are either based on current practice or are suggested days of operation. VIA Rail, in consultation with Canadian National Railways and CP Rail, will be expected to set the actual scheduled times and days of operation.

(i) Recommended Off-peak Service:

Table 1 shows the recommended off-peak service. Capreol-Winnipeg trains 7 and 8 would continue to operate on a six-days-per-week basis. Scheduled times are based on those in effect as of June 1, 1978, the last period during which the four-night, three-day Montréal-Vancouver schedule was in effect. Instead of travelling overnight on the Capreol-Nakina section, trains 7 and 8 would travel overnight on the Nakina-Winnipeg section. Trains 7 and 8 would continue to provide baggage, coach, cafe-lounge and sleeping facilities. Instead of using Capreol as a terminal, they would operate directly in and out of Sudbury, thereby effecting an across-platform connection with the Montréal and Toronto trans-continental trains. This would eliminate the need for a bus connection.

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Table 1Recommended Off-peak Service

# 5	# 7	# 677				# 678	# 8	# 6	
DAILY	EX.TU	FR,SU				TH,SA	EX.WE	DAILY	
--	<u>2330</u>	--	--	Dp	TORONTO	Ar	--	--	<u>0750</u>
--	<u>0715</u>	--	--	Ar	SUDBURY	Dp	--	--	<u>2350</u>
--	--	<u>0830</u>	--	Dp	--	Ar	--	<u>2130</u>	--
--	--	0930	--	Dp	CAPREOL	Ar	--	2030	--
--	--	1800	--	Ar	HORNEPAYNE	Dp	--	1210	--
--	--	1820	--	Dp	--	Ar	--	1150	--
--	--	2145	--	Ar	NAKINA	Dp	--	0850	--
--	--	0035	--	Ar	ARMSTRONG	Dp	--	0540	--
--	--	0045	<u>0800</u>	Dp	--	Ar	<u>2110</u>	0530	--
--	--	0320	1150	Dp	SIOUX LOOKOUT	Ar	1520	0040	--
--	--	--	1510	Dp	FARLANE	Ar	1200	--	--
--	--	<u>0940</u>	<u>1900</u>	Ar	WINNIPEG	Dp	<u>0800</u>	<u>1820</u>	--
DAILY	EX.WE	FR,SU				TH,SA	EX.TU	DAILY	

Table 2Recommended Peak Season Service

# 3	# 675	# 677	# 149			# 678	# 148	# 4	# 676
DAILY	TU, TH,SA	FR,SU	SU			TH,SA	FR	DAILY	MO, WE,FR
<u>2330</u>	--	--	--	Dp	TORONTO	Ar	--	--	<u>0750</u>
<u>0715</u>	--	--	--	Ar	SUDBURY	Dp	--	--	<u>2350</u>
<u>0830</u>	--	--	--	Dp	--	Ar	--	--	<u>2130</u>
<u>0930</u>	<u>1000</u>	--	--	Dp	CAPREOL	Ar	--	--	<u>2030</u>
<u>1800</u>	<u>1830</u>	--	--	Ar	HORNEPAYNE	Dp	--	--	<u>1210</u>
<u>1820</u>	--	--	--	Dp	--	Ar	--	--	<u>1150</u>
<u>2145</u>	--	--	--	Ar	NAKINA	Dp	--	--	<u>0850</u>
<u>0035</u>	--	--	--	Ar	ARMSTRONG	Dp	--	--	<u>0540</u>
<u>0045</u>	--	<u>0800</u>	--	Dp	--	Ar	<u>2050</u>	--	<u>0530</u>
<u>0320</u>	--	1150	--	Dp	SIOUX LOOKOUT	Ar	1500	--	<u>0040</u>
--	--	1510	<u>1730</u>	Dp	FARLANE	Ar	1140	<u>2130</u>	--
<u>0940</u>	--	<u>1900</u>	<u>2120</u>	Ar	WINNIPEG	Dp	<u>0800</u>	<u>1750</u>	<u>1820</u>
DAILY	TU, TH,SA	FR,SU	SU			TH,SA	FR	DAILY	MO, WE,FR

The tri-weekly local service provided by trains 675 and 676 between Capreol and Nakina would no longer operate during the off-peak, because the new pattern of service for trains 7 and 8 with their longer schedule between Capreol and Winnipeg will permit them to make local stops during daytime hours.

A new local service, numbered 677 and 678 in the tables and equipped with baggage and coach facilities, would be inaugurated between Winnipeg and Armstrong. These trains would run twice-weekly on daytime schedules. I suggest that the trains leave Winnipeg Thursday and Saturday and return from Armstrong Friday and Sunday. One advantage of this pattern would be that passengers could travel to Winnipeg on Friday, arriving in the early evening, and then return from Winnipeg on Train 8 Sunday evening. The passenger service now provided by mixed trains 286 and 287 between Winnipeg and Sioux Lookout would be discontinued, with their passenger-related stops and duties to be performed by the new local trains.

(ii) Recommended Peak Season Service:

Table 2 shows the recommended peak season service. Transcontinental trains 3 and 4 would be shifted from the CP route via Thunder Bay to the CN route across Northern Ontario. The trains would operate on their normal routes and schedules between Toronto and Sudbury and between Winnipeg and Vancouver, but would follow the route and schedules of off-peak trains 7 and 8 between Sudbury, Capreol and Winnipeg. Thus, there would be daily, through, Toronto-Vancouver transcontinental service over the CN line during the peak season.

In addition to the local service provided by trains 677 and 678 between Armstrong and Winnipeg, local trains 675 and 676 would operate tri-weekly

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between Capreol and Hornepayne during the peak season only, in order to relieve transcontinental trains 3 and 4 of the need to make local stops. I recommend that trains 675 and 676 not be operated onward between Hornepayne and Nakina, because of the small number of passengers now using the trains on that route segment.

Peak season trains 148 and 149 between Winnipeg and Farlane, sometimes called the "Campers' Special", have been included in the table, although they were not considered at the hearings. It might be possible to combine trains 148 and 149 with the recommended trains 677 and 678 between Winnipeg and Farlane. I suggest that VIA Rail look into the possibility.

Before discussing costs, I would like to stress once more that the days of operation and scheduled times are VIA Rail's prerogative. Those described above seem reasonable, but others might be more convenient or operationally feasible.

(iii) Estimated Annual Cost:

The estimated annual cost of service across Northern Ontario is shown in Table 3.

The Final Plan service would cost \$22.7 million in the off-peak and \$15.8 million in the peak season, for a total of \$38.5 million.

The presently-operated version of the Final Plan costs \$26.5 million in the off-peak and \$17.0 million in the peak season, for a total of \$43.5 million. The additional cost over that of the Final Plan results from the operation of trains 7 and 8 six-times-per-week instead of tri-weekly.

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Table 3

Estimated Annual Cost of Northern Ontario Service

<u>Trains</u>	<u>Route</u>	<u>Frequency</u>		<u>Annual Cost (\$ M.)</u>		
		<u>Off-peak</u>	<u>Peak</u>	<u>Off-peak</u>	<u>Peak</u>	<u>Total</u>
<u>FINAL PLAN</u>						
1/2	Sudbury-Thunder Bay-Winnipeg	DAILY	DAILY	17.4	6.9	24.3
3/4	Sudbury-Thunder Bay-Winnipeg	--	DAILY	--	7.2	7.2
7/8	(Sudbury) Capreol-Winnipeg	3/WK	3/WK	4.2	1.4	5.6
286/287	Winnipeg-Sioux Lookout	2/WK	2/WK	0.1	A	0.1
675/676	Capreol-Nakina	3/WK	3/WK	<u>1.0</u>	<u>0.3</u>	<u>1.3</u>
Totals				22.7	15.8	38.5
<u>FINAL PLAN AS PRESENTLY-OPERATED</u>						
1/2	Sudbury-Thunder Bay-Winnipeg	DAILY	DAILY	17.4	6.9	24.3
3/4	Sudbury-Thunder Bay-Winnipeg	--	DAILY	--	7.2	7.2
7/8	(Sudbury) Capreol-Winnipeg	6/WK	6/WK	8.0	2.6	10.6
286/287	Winnipeg-Sioux Lookout	2/WK	2/WK	0.1	A	0.1
675/676	Capreol-Nakina	3/WK	3/WK	<u>1.0</u>	<u>0.3</u>	<u>1.3</u>
Totals				26.5	17.0	43.5
<u>RECOMMENDED SERVICE</u>						
1/2	Sudbury-Thunder Bay-Winnipeg	DAILY	DAILY	17.4	6.9	24.3
3/4	Sudbury-Capreol-Winnipeg	--	DAILY	--	7.2	7.2
7/8	Sudbury-Capreol-Winnipeg	6/WK	--	8.0	--	8.0
675/676	Capreol-Hornepayne	--	3/WK	--	0.3	0.3
677/678	Winnipeg-Sioux Lookout	2/WK	2/WK	<u>0.5</u>	<u>0.2</u>	<u>0.7</u>
Totals				25.9	14.6	40.5

Note:

A) Peak season cost is included in Off-peak figure of \$0.1 million.

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The recommended service would cost \$25.9 million in the off-peak and \$14.6 million in the peak season, for a total of \$40.5 million. The major saving compared to the Final Plan occurs during the peak season when trains 3 and 4 are routed over the CN line, thereby obviating the need to operate trains 7 and 8. Furthermore, local trains 675 and 676 would not be required during the off-peak and would operate between Capreol and Hornepayne only during the peak season. The cost of the new local trains 677 and 678 between Armstrong and Winnipeg would be offset partially by the fact that Sioux Lookout-Winnipeg mixed trains 286 and 287 would no longer be required.

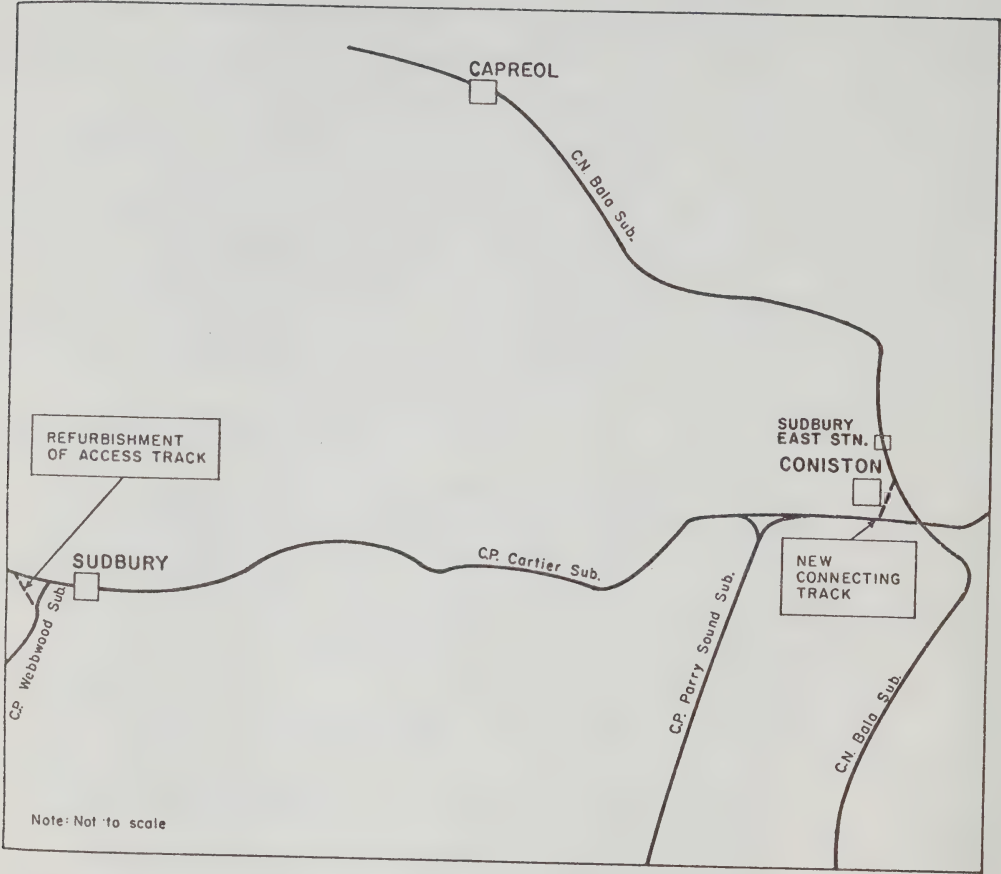
In conclusion, the recommended service would cost \$2 million more than the Final Plan service as originally intended but \$3 million less than the Final Plan service as presently-operated.

(iv) Operation Between Sudbury and Capreol:

The recommended service would have trains 7 and 8 during the off-peak and trains 3 and 4 during the peak season gain access to and from the CP Sudbury station, in order to effect direct, across-platform transfers. This will result in more convenient service, especially for the handicapped and people travelling with children.

Figure 1 shows certain CP and CN lines in the Sudbury and Capreol area. One option would involve the construction of a short connecting track at Coniston to permit off-peak trains 7 and 8 to operate without backing up. Peak season trains 3 and 4, however, would have to be turned. For example, Train 3 would arrive at Sudbury pointed west in the normal manner and then exchange cars with Train 1 from Montréal. Train 3 would then have to move forward to the west of Sudbury station, wye there on CP's Webbwood Subdivision, and then run forward through Sudbury and on to Capreol in the same manner as trains 7 and 8.

FIGURE 1: RAIL ACCESS BETWEEN SUDBURY AND CAPREOL



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There are, it would appear, certain problems with the operation that I have described above. The westward wye between CP's Cartier and Webbwood subdivisions would have to be refurbished and the new access track at Coniston between CP's Cartier Subdivision and CN's Bala Subdivision would have to cross a creek. I feel, therefore, that VIA Rail in cooperation with CP and CN should examine this and other options and choose the most cost-effective and operationally-feasible one. Until the best option has been chosen and the necessary work completed, the presently-operated bus transfer to and from trains 7 and 8 could be continued. As for peak season trains 3 and 4, VIA Rail may wish to operate directly between Toronto and Capreol by using the CN line between South Parry and Capreol, as was done under the Modified Transitional Plan. This would eliminate the need to use CP's Webbwood Subdivision to turn the train but would require a bus transfer between the CN's Sudbury East station location and VIA's downtown Sudbury station to enable connections with trains 1 and 2 at the latter station.

AUGMENTED SERVICE

I would like to stress that the service described on the previous pages is the minimum service I feel is required, given all of the circumstances.

It may well be, however, that VIA Rail, either for its own reasons or at the direction of the Government of Canada, will want to provide a service augmented over and above my recommended service. This, of course, is essentially what happened both in October, 1978, when the Governor-in-Council accepted the Minister of Transport's recommendation that the Final Plan be delayed for one year, and in October, 1979, when the Minister directed VIA to augment the Final Plan's frequency of service between Capreol and Winnipeg.

The service that I have recommended could be augmented in several ways. For example, Capreol-Winnipeg off-peak trains 7 and 8 could be operated daily instead of six-times-per-week. The same number of train sets - three - would be required. The daily service would boost the annual cost of the overall service by \$1.2 million. Another example involves the recommended Winnipeg-Armstrong local service: tri-weekly rather than bi-weekly service would boost the annual cost of the overall service by \$0.4 million.

I suggest that the concept of involving provincial and local authorities and organizations in the financing of regional services such as those between Sudbury, Capreol and Winnipeg be considered. This concept may have particular relevance in the Northern Ontario, where service additional to the basic level I recommend might be desirable.

The involvement of provincial and local bodies could be patterned on the American procedure, whereby a state government plans a passenger-train service according to its own priorities and requirements and contracts with Amtrak to provide the service, the cost being paid partly by Amtrak and partly by the state government. In return for - in the scale of overall transport spending - a relatively modest amount of money, the state government is able to determine the role of such regional passenger-train services and, to a large extent, the operational details. The advantage of the approach to the federal government is that, through its agency, Amtrak, it is able to provide a service more attuned to local needs and to reduce its financial commitment, all the time retaining the federal presence in the state concerned.

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It seems likely that this approach could be adopted for use in Canada. The federal government, through VIA Rail, could reduce its annual subsidy to rail passenger service while maintaining its presence throughout the country. A province could demonstrate its faith in the future of rail passenger service by making a financial commitment, in return, of course, for an effective say in the operation of the service. In Northern Ontario, it may be that the provincial government, upon careful study of the matter, would be interested in helping to pay for service frequency above that which I have recommended to meet basic needs. If local travel for educational or medical purposes could be made more convenient by the addition of extra trains each week, hopefully the province might come to understand the value of assisting with the provision of that additional frequency.

I strongly recommend that VIA Rail explore this matter fully with both the Government of Canada and the Government of Ontario.

EQUIPMENT

In the past, the railways sometimes operated a single car incorporating sleeping, meal and lounge facilities on services which could not support separate cars. The time has come for VIA Rail to examine the feasibility of rebuilding existing cars into multi-purpose cars. On lightly-patronized regional and remote routes such as Sudbury-Capreol-Winnipeg, substantial reduction in car-mile costs could be achieved by operating such cars, perhaps a sleeper-meal-lounge car or a baggage-sleeper car. The initial capital cost of rebuilding would be recovered quickly, given the substantial cost of operating each car, if a four-car train such as trains 7 and 8 could be reduced to three cars.

The use of Rail Diesel Car equipment on local trains has been considered but not discussed here because of VIA Rail's acute shortage of such cars. There is no doubt, however, that RDC's would reduce the cost significantly and should be considered if and when such cars become available. Furthermore, VIA Rail should investigate the possibility of substituting mixed freight-passenger trains for local passenger trains. If mixed train services could be operated more reliably and conveniently, their use would be most advantageous from the point of view of cost.

VIA RAIL CANADA INC.

In submitting my report, I feel obligated to make three comments concerning VIA Rail.

First, certain aspects of VIA's presentation at the hearings were less than adequate. In dealing with the question of future passenger-train service between Capreol and Winnipeg, VIA presented eight options, each of which was a variation of another and, to say the least, quite complicated. These options were not immediately available in written form for consideration by myself, Commission Staff or people who were present at the hearings. This in itself is sufficient to give the Commission cause for concern. However, the fact that representatives of VIA would not state a preference for one or more of the options and did not in any way indicate which option best suited their budget made it very difficult for the Commission to apply the usual tests of determining whether or not a given passenger service should be continued, discontinued or altered.

Secondly, as mentioned earlier in this Report, VIA Rail recently asked for and was granted permission to alter the schedules of overall, Montréal/Toronto-Vancouver transcontinental service. It would have been helpful to the

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Committee to have been informed of this proposal at the time of the hearings, because of its impact upon the Northern Ontario services. VIA did not mention that such a proposal was, if not finalized, at least being contemplated.

Thirdly, there appears to be a wide discrepancy between the costs presented by VIA at the hearings and the costs of my recommended service as estimated by Committee staff using railway costs under Order No. R-6313. VIA's costs seem to be between 20 and 25 percent higher than those developed by Committee staff. I suggest to the Committee that an investigation of this matter be undertaken due to the significant discrepancies involved.

IMPLEMENTATION

I recommend to the Committee that the above-described plan be implemented in the following manner:

- a) The recommended off-peak service should be implemented on September 29, 1980, the date that VIA Rail have selected for implementation of the revised western transcontinental service pattern.
- b) The recommended peak season service should be implemented effective with the summer season of 1981, on such date as VIA Rail may choose to begin running transcontinental Trains Nos. 3 and 4 across Northern Ontario to supplement the year-round service provided by transcontinental Trains Nos. 1 and 2.

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- c) The necessary work to enable access between Sudbury and Capreol should be carried out as soon as possible, with the presently-operated bus transfer to be continued in the interim.
- d) As long as the basic patterns and frequencies of service are adhered to, the actual days of operation, scheduled times and operational aspects should be determined by VIA Rail.
- e) The discrepancies between VIA Rail's costs as presented at the hearings and the costs estimated by Committee staff should be investigated by the Committee.

Respectfully submitted,

(signed)

J.F. Walter,
Commissioner.



RAILWAY TRANSPORT COMMITTEE

ORDER NO. R-30915

May 29, 1980

IN THE MATTER OF Section 260 of the Railway Act and the application of the Canadian National Railways to discontinue their passenger-train service comprising of Trains Nos. 675 and 676 operating between Capreol and Nakina;

IN THE MATTER OF the Final Plan for Western Transcontinental Passenger Train Service (October, 1977); and

IN THE MATTER OF a reconsideration of the application of the Canadian National Railways pursuant to Section 260(8) of the Railway Act.

File No. 49467.62.1

UPON hearing the matters at public hearings chaired by Commissioner J.F. Walter at Sioux Lookout, December 4, 1979; Hornepayne, December 6, 1979, and Capreol, December 7, 1979; and

UPON receiving the Report of Commissioner Walter, a copy of which is attached as Schedule "A".

THE COMMITTEE HEREBY ORDERS THAT:

1. The Report of Commissioner Walter is adopted as submitted.
2. The Report shall be published on the same date as the publication of this Order.

COMITE DES TRANSPORTS PAR CHEMIN DE FER

ORDONNANCE N° R-30915

Le 29 mai 1980

RELATIVE à l'article 260 de la Loi sur les chemins de fer et à la requête présentée par les Chemins de fer Nationaux du Canada en suppression de leur service de trains de voyageurs assuré au moyen des trains n^{os} 675 et 676 entre Capr  ol et Nakina;

RELATIVE au Plan d  finitif pour le service de l'Ouest des trains trans-continentaux de voyageurs (octobre 1977); et

RELATIVE au r  examen de la requ  te des Chemins de fer Nationaux du Canada, conform  ment au paragraphe 260(8) de la Loi sur les chemins de fer.

Dossier n   49467.62.1

APRES la tenue d'audiences publiques pr  sid  es par le commissaire J.F. Walter    Sioux Lookout, le 4 d  cembre 1979;    Hornepayne, le 6 d  cembre 1979 et    Capr  ol, le 7 d  cembre 1979; et

APRES r  ception du rapport du commissaire Walter, dont une copie est pr  sent  e    l'annexe A.

LE COMITE PAR LA PRESENTE ORDONNE CE QUI SUIT:

1. Est adopt   le rapport du commissaire Walter, dans sa forme originale.
2. La publication simultan  e du rapport et de la pr  sente ordonnance.

ORDER NO. R-30915

ORDONNANCE N^O R-30915

3. Effective September 29, 1980, VIA Rail Canada Inc. and the Canadian National Railways shall discontinue the year-round passenger-train service now provided by trains 675 and 676 between Capreol and Nakina, Ontario.
4. The Railways shall restore, effective with the summer season of 1981 on such date as VIA Rail Canada Inc. may choose to begin running transcontinental trains 3 and 4 across Northern Ontario to supplement the year-round service provided by transcontinental trains 1 and 2, the tri-weekly local passenger-train service now being provided by trains 675 and 676 between Capreol and Hornepayne, Ontario, to run during the summer season of 1981 and subsequent summer seasons.
5. VIA Rail Canada Inc., not later than September 1, 1980, shall:
 - (a) post a Notice in the form of Schedule "B" attached to this Order in a conspicuous place at each station served by the passenger-train service and in the passenger-carrying cars used in providing the passenger-train service;
 - (b) mail or deliver one copy of the said Notice to:
 - (i) the Attorney-General of the Province of Ontario;
 - (ii) the Members of Parliament and of the Provincial Legislature of each constituency in which the passenger-train service is operated; and,
3. VIA Rail Canada Inc. et les Chemins de fer Nationaux du Canada devront supprimer, à compter du 29 septembre 1980, le service de trains de voyageurs assuré présentement à longueur d'année entre Capréol et Nakina (Ontario) au moyen des trains n^{os} 675 et 676.
4. Les compagnies ferroviaires devront rétablir le service de trains de voyageurs local assuré actuellement trois fois par semaine par les trains n^{os} 675 et 676 entre Capréol et Hornepayne (Ontario) à l'été de 1981 et pendant les années qui suivront, à la date que choisira VIA Rail Canada Inc. pour exploiter les trains transcontinentaux n^{os} 3 et 4 dans le nord de l'Ontario, en vue de compléter le service assuré à longueur d'année par les trains transcontinentaux n^{os} 1 et 2.
5. VIA Rail Canada Inc. devra, au plus tard le 1^{er} septembre 1980:
 - a) afficher un avis, sous forme de l'annexe B ci-jointe, à un endroit bien en évidence dans chaque gare desservie par le service de trains de voyageurs ainsi que dans les voitures utilisées pour assurer ce service;
 - b) expédier par la poste ou livrer une copie dudit avis aux personnes suivantes:
 - i) le procureur général de la province de l'Ontario;
 - ii) les députés fédéraux et provinciaux de chaque circonscription desservie; et



Canadian Transport
Commission

Commission canadienne
des transports

RAILWAY TRANSPORT COMMITTEE

COMITE DES TRANSPORTS PAR CHEMIN DE FER

ORDER NO. R-30916

ORDONNANCE N° R-30916

May 29, 1980

Le 29 mai 1980

IN THE MATTER OF Section 260 of the Railway Act and the application of the Canadian National Railways to discontinue their passenger-train service comprising of Trains Nos. 286 and 287 operating between Winnipeg and Sioux Lookout;

IN THE MATTER OF Order No. R-22346 issued February 26, 1976; and

IN THE MATTER OF a reconsideration of the application of the Canadian National Railways pursuant to Section 260(8) of the Railway Act.

RELATIVE à l'article 260 de la Loi sur les chemins de fer et à la requête des Chemins de fer Nationaux du Canada en suppression de leur service de trains de voyageurs assuré entre Winnipeg et Sioux Lookout au moyen des trains n° 286 et 287;

RELATIVE à l'ordonnance n° R-22346 du 26 février 1976; et

RELATIVE au réexamen de la requête des Chemins de fer Nationaux du Canada, en vertu du paragraphe 260(8) de la Loi sur les chemins de fer.

File No. 49467.62.1

Dossier n° 49467.62.1

UPON hearing the matters at public hearings chaired by Commissioner J.F. Walter at Sioux Lookout, December 4, 1979; Hornepayne, December 6, 1979, and Capreol, December 7, 1979; and

UPON receiving the Report of Commissioner Walter, a copy of which is attached as Schedule "A".

THE COMMITTEE HEREBY ORDERS THAT:

1. The Report of Commissioner Walter is adopted as submitted.
2. The Report shall be published on the same date as the publication of this Order.
3. VIA Rail Canada Inc. and the Canadian National Railways shall discontinue the passenger-train service now provided by mixed freight-passenger trains 286 and 287 between Winnipeg, Manitoba and Sioux Lookout, Ontario, effective September 29, 1980.

APRES audition de l'affaire lors d'audiences publiques présidées par le commissaire J.F. Walter à Sioux Lookout, à Hornepayne et à Capreol, les 4, 6 et 7 décembre 1979 respectivement; et

APRES réception du rapport du commissaire Walter, dont une copie est présentée à l'annexe A.

LE COMITE PAR LA PRESENTE ORDONNE CE QUI SUIT:

1. Est adopté le rapport du commissaire Walter dans sa forme originale.
2. Que le rapport soit publié à la même date que la présente ordonnance.
3. Que VIA Rail Canada Inc. et les Chemins de fer Nationaux du Canada cessent d'exploiter, à compter du 29 septembre 1980, le service de voyageurs assuré entre Winnipeg (Manitoba) et Sioux Lookout (Ontario), au moyen des trains mixtes marchandise-voyageurs n°s 286 et 287.

ORDER NO. R-30916

ORDONNANCE N° R-30916

4. VIA Rail Canada Inc., not later than September 1, 1980, shall:

(a) post a Notice in the form of Schedule "B" attached to this Order in a conspicuous place at each station served by the passenger-train service and in the passenger-carrying car used in providing the passenger-train service;

(b) mail or deliver one copy of the said Notice to:

i) the Attorneys-General of the Provinces of Ontario and Manitoba;

ii) the Members of Parliament and of the Provincial Legislatures of each constituency in which the passenger-train service is operated; and

iii) the Secretary or Clerk of each city, town and municipality in which the passenger-train service is operated; and

(c) attach to the Notice, a timetable or other description of the Capreol-Winnipeg and local passenger-train services to be provided over the Winnipeg-Sioux Lookout route segment effective September 29, 1980.

4. Que VIA Rail Canada Inc. et ce, au plus tard le 1^{er} septembre 1980:

a) affiche un avis, sous forme de l'annexe B ci-joint, à un endroit bien en vue dans chaque gare desservie par le service de trains de voyageurs ainsi que dans les voitures utilisées pour assurer ce service;

b) expédie par la poste ou livre copie dudit avis aux personnes suivantes:

i) le procureur général de l'Ontario et du Manitoba respectivement;

ii) les députés fédéraux et provinciaux de chaque circonscription desservie; et

iii) le secrétaire ou greffier de chaque ville et municipalité desservie; et

c) joigne à l'avis un indicateur ou toute autre description du service assuré entre Capreol et Winnipeg et du service local de voyageurs devant être exploités sur le tronçon Winnipeg-Sioux Lookout, à compter du 29 septembre 1980.

(signed)

(signature)

G.E. MacDonald

Acting Secretary
Railway Transport Committee

Secrétaire suppléant
Comité des transports par chemin de fer



Canadian Transport
Commission

Commission canadienne
des transports

Handwritten signature and date: 1980/07/03

RAILWAY TRANSPORT COMMITTEE

COMITE DES TRANSPORTS PAR CHEMIN DE FER

ORDER NO. R-31079

ORDONNANCE N° R-31079

July 3, 1980

le 3 juillet 1980

IN THE MATTER OF Order No. R-6751
of September 19, 1969;

RELATIVE à l'ordonnance n° R-6751 du
19 septembre 1969;

IN THE MATTER OF the Final Plan for
Western Transcontinental Passenger-
Train Service issued in October,
1977; and

RELATIVE au plan définitif pour le service
de l'Ouest des trains transcontinentaux de
voyageurs rendu en octobre 1977; et

IN THE MATTER OF the application by
VIA Rail Canada Inc. dated June 13,
1980 to integrate during the off-
peak period transcontinental Trains
Nos. 1 and 2 and the passenger-train
service provided, in co-operation
with Canadian Pacific Limited, by
Trains Nos. 185 and 186 between
Sudbury and White River, Ontario.

RELATIVE à la requête présentée par VIA
Rail Canada Inc. en date du 13 juin 1980
en vue d'intégrer durant la saison régu-
lière, en coopération avec Canadien Pacifique
Limitée, le service assuré par les trains
transcontinentaux n°^{OS} 1 et 2 et le service
voyageurs assuré entre Sudbury et White
River (Ontario) au moyen des trains n°^{OS}
185 et 186.

Files Nos. 49893-2-3
49466.12

Dossiers n°^{OS} 49893-2-3
49466.12

WHEREAS the Railway Transport
Committee (the Committee) has
authorized VIA Rail Canada Inc.
(VIA Rail) to implement a four-
night, three-day transcontinental
schedule between Montreal, Toronto
and Vancouver, effective September
29, 1980;

ATTENDU que le Comité des transports par
chemin de fer (le Comité) a autorisé VIA
Rail Canada Inc. (VIA Rail) à mettre en
application un service transcontinental
de quatre nuits, trois jours par semaine
effectuant la liaison Montréal, Toronto
et Vancouver, à compter du 29 septembre
1980;

WHEREAS VIA Rail has advised that
the transcontinental schedule to
take effect September 29, 1980 will
provide service between Sudbury and
White River during the day-light
hours; and

ATTENDU que VIA Rail a informé le Comité
que le service transcontinental devant
être inauguré à compter du 29 septembre
1980 circulera entre Sudbury et White
River durant le jour; et

WHEREAS VIA Rail is of the opinion
that unnecessary duplication there-
fore will result in the off-peak
period between the transcontinental
service and the service now provided
by Trains Nos. 185 and 186.

ATTENDU que VIA Rail est d'avis qu'il en
résultera une duplication inutile, en
saison régulière, entre le service trans-
continental et le service actuellement
assuré au moyen des trains n°^{OS} 185 et 186.

ORDER NO. R-31079

ORDONNANCE N^O R-31079

IT IS HEREBY ORDERED THAT:

1. During off-peak periods, VIA Rail Canada Inc. and Canadian Pacific Limited (the Railways) shall integrate transcontinental Trains Nos. 1 and 2 and the passenger-train service now provided by Trains Nos. 185 and 186 between Sudbury and White River, effective September 29, 1980.

2. In order to achieve the integration referred to in Clause 1, the Railways shall:

(a) discontinue the passenger-train service now provided by Trains Nos. 185 and 186 between Sudbury and White River during the off-peak season effective September 29, 1980; and

(b) restore, effective with the first day of the peak summer season of 1981, the passenger-train service now provided by Trains Nos. 185 and 186, to be operated during the peak summer season of 1981 and subsequent years.

3. Should implementation of the proposed four-night, three-day transcontinental schedule be delayed beyond September 29, 1980 date, VIA Rail shall continue to operate Trains Nos. 185 and 186 until such time as the new transcontinental schedule is in effect.

4. VIA Rail shall ensure that, effective September 29, 1980, all duties and stops now performed by Trains Nos. 185 and 186 are performed adequately by transcontinental Trains Nos. 1 and 2, and the addition of these duties and stops does not adversely affect the on-time performance of Trains Nos. 1 and 2 or result in inconvenient arrival or departure times at major cities such as Thunder Bay and Sudbury.

IL EST PAR LA PRESENTE ORDONNE CE QUI SUIT:

1. VIA Rail Canada Inc. et Canadien Pacifique Limitée (les compagnies ferroviaires) devront intégrer, durant la saison régulière, le service assuré par les trains transcontinentaux n^{os} 1 et 2 et le service voyageurs actuellement assuré entre Sudbury et White River au moyen des trains n^{os} 185 et 186, à compter du 29 septembre 1980.

2. Afin d'accomplir la fusion mentionnée à l'article 1, les compagnies ferroviaires devront:

a) supprimer le service voyageurs actuellement assuré au moyen des trains n^{os} 185 et 186 entre Sudbury et White River exploité durant la saison régulière à compter du 29 septembre 1980; et

b) rétablir, à compter du premier jour de pointe de l'été 1981, le service voyageurs actuellement assuré au moyen des trains n^{os} 185 et 186, devant être exploité durant la saison de pointe d'été 1981 et les années suivantes.

3. Au cas où la mise en application du service transcontinental projeté de quatre nuits, trois jours par semaine devait être retardé au-delà du 29 septembre 1980, VIA Rail devra continuer à exploiter les trains n^{os} 185 et 186 jusqu'à ce que le nouveau service transcontinental soit établi.

4. VIA Rail devra s'assurer, qu'à compter du 29 septembre 1980, les fonctions et les arrêts exécutés par les trains n^{os} 185 et 186 sont effectués efficacement par les trains transcontinentaux n^{os} 1 et 2 et que l'adjonction de ceux-ci n'influera pas sur le rendement des trains n^{os} 1 et 2 ou ne résultera pas en des temps d'arrivée et de départ inopportuns à des villes importantes telles que Thunder Bay et Sudbury.

COMPETITION

COMPETITION IN RAIL TRANSPORTATION



Ontario Task Force on Provincial Rail Policy

July 1980

IBI Group

COMPETITION IN RAIL TRANSPORTATION

A REPORT TO THE ONTARIO TASK FORCE
ON PROVINCIAL RAIL POLICY

July, 1980

IBI Group



156 Front Street West
6th Floor
Toronto, Canada
M5J 2L6
(416) 596-1930

July 30, 1980

Mr. David S. Barrows
Director
Policy and Priorities Division
Ministry of Industry and Tourism
900 Bay Street
Hearst Block
Queen's Park
Toronto, Ontario
M7A 2E6

Dear Mr. Barrows:

Competition in Rail Transportation

In accordance with our letter of proposal dated June 15, 1980 and the subsequent agreement between the Ministry of Industry and Tourism and IBI Group, dated July 11, 1980, we are pleased to submit our report on the above project.

The report is divided into five chapters, dealing respectively with the following topics:

1. Differences in the levels of government financial support for the various transportation modes;
2. Competition between railway companies in Ontario;
3. Intermodal competition in providing passenger transportation in Ontario;
4. Intermodal competition in providing freight transportation in Ontario;
5. Public policy options.

The body of the report is followed by a substantial appendix which contains supporting tables, graphs and text. In accordance with the agreement, and because of the limited time available to complete the report, it is based almost entirely upon previously published material, augmented by the authors' opinions regarding the existing situation regarding competition in rail transportation and possible policy options for the Province in this area.

Mr. David S. Barrows

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This letter constitutes an executive summary of our findings and conclusions.

TRANSPORT SUBSIDIES

Analysis by Dr. Zis Haritos of Transport Canada shows that deficits as a percentage of total cost for rail, marine, air and road in 1973 were 26, 22, 16 and 6 percent respectively, with the deficit being made up by government subsidies.

For passenger transport, levels of subsidy per passenger mile over the period 1970-74 were in the range 3¢-11.1¢ for rail, 2.0¢-2.6¢ for air, 0.6¢ for the private automobile, and essentially zero for bus. Such a comparison, when coupled with the complaint by bus operators that "predatory" rail pricing is forcing them to lose money on competing runs, raises the issue of whether it would not be more cost-effective to raise passenger rail fares, thereby reflecting somewhat more realistically the cost of providing rail service, reducing somewhat the rail passenger subsidy required from the taxpayer and allowing bus operators to remain profitable while charging competitive rates on such routes.

Trucks have a relative advantage over railways in that their infrastructure is provided by the government. Various studies have indicated that road users do not pay the full costs of the road system but results are inconclusive as to whether trucks pay their proportionate share of these user costs. In either case, truck carriers do have an advantage over railways, especially when it is noted that railway fuel is taxed but railways receive relatively few services from the Provincial Government which receives the tax.

The issue of whether or not users should be paying a larger share of transport costs, with a smaller share coming from government funds, has been of substantial concern during the past several decades. There has been a trend toward higher user charges during the past two decades, as evidenced by virtual deregulation of rail freight rates in 1967, and substantial increases in airport user charges and St. Lawrence Seaway tolls during the past few years. The thrust of the recent Federal Transportation Policy Review, as published in 1975, was that users should pay 100% of the costs in "mature" (commercially viable) transportation situations and government should continue to provide financial support in "developing" situations. The latter were defined as corridors/situations in which transport services are essential or desirable but traffic densities are not sufficient to support commercially viable services. The long distances and harsh terrain encountered in many parts of Canada have required such an approach in the past and will continue to do so undoubtedly in the future. The question arises, however, whether continuing subsidies to transportation in the more densely settled parts of Canada, as documented in this report, are justified.

The Government of Ontario may wish to consider studying certain aspects of this question in more detail, for example rail passenger subsidies as noted above, rail and trucking subsidies for shipments from the Maritime Provinces and federal road strengthening/improvement programs for the Maritime and

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Prairie regions, to determine whether it wishes to take a position with the Federal Government regarding possible changes in these subsidy levels or introduction of similar subsidies which would be of more direct benefit to Ontario, for example in Northern Ontario.

INTRA-RAIL COMPETITION

Review of an Ontario railway map shows clearly that, while most major communities in Southern Ontario are served by both CN and CP, most communities/shippers in Northern Ontario are served by only one railway. The situation, particularly in Southern Ontario, is complicated by the fact that a shipper cannot negotiate rates with a second railway unless it is within four miles of the "interswitching point" between the railway providing direct service and the second railway. The Government of Ontario may wish to consider taking a position that this "interswitching distance" should be increased substantially, thus enabling more shippers to negotiate directly with two railways.

A second limitation on intra-rail competition is the 30% customs tariff applied to shipments between two points in Canada over rail lines in the U.S.A. Consideration could be given to enabling the Canadian Transport Commission to waive this customs tariff, partially or completely, in cases of special public interest.

Government may also wish to take a position on a policy which would require the railways to quote joint rates over the most direct routes rather than allowing a carrier to quote rates over a more circuitous route which is "reasonable and practicable". Legislative provisions (Section 279 of the Railway Act) also give railways in Canada the right to agree upon and charge common rates which also reduces rate competition.

While the above legislative and regulatory conditions work to reduce intra-rail competition, shippers do put a value on intra-rail competition, particularly in terms of service levels. For example, a 1978 CTC report by McLaughlin reports that slightly less than one-third of shippers in Ontario's mining and forestry industry reported strong rail-rail competition on service quality, while just over one-quarter reported strong price competition. In both cases, rail-rail competition was perceived to be much weaker than either truck-truck or rail-truck competition.

Market competition is also a pervasive factor which limits the rates charged by railways to "captive shippers"; if the rates are set too high, the product will not be able to compete in the market place with the same product from other sources, the traffic will not move, and the railway as well as the producer will lose business. Market competition is seen as being more effective in many instances than intra-rail competition.

There is virtually no objective evidence in the existing literature regarding the extent to which shippers served by only one railway are actually paying higher rail rates or receiving poorer service than those served by two or more railways. Because of the complexity of rail rates, and the factors that influence them, it would be very difficult to measure these effects objectively. It seems likely that, while individual anomalies undoubtedly exist, the forces

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of market and intermodal competition are sufficient to protect most shippers from abuse of this type. A common perception is that shippers in large cities have greater choice and therefore more "muscle" with which to negotiate with the railways. Shippers in more remote locations, served by only one railway, are seen as being more vulnerable. The policy initiatives noted above in this section could help to reduce this vulnerability.

INTERMODAL COMPETITION IN PASSENGER TRANSPORTATION

The three public modes, rail, air and bus, are reasonably competitive for trips within the 200-500 mile range; for longer trips air has a clear advantage; for shorter trips bus and rail have the advantage. The dominant mode for trips at least up to 500 miles is the private automobile, which carries about 64% of the total market between Toronto and six urban areas (Windsor, London, Sudbury, North Bay, Ottawa, Montreal) and substantial percentages for shorter intercity trips.

The modal shares for the six city pairs referred to above reflect the level of service provided by each mode which is, in turn, influenced by traffic densities and the existence of suitable transportation infrastructure. For example, Ottawa, Sudbury and Windsor are about equidistant from Toronto (240 miles), yet the modal shares between them and Toronto are quite different: Ottawa has the highest proportion of air travel and the lowest by rail, reflecting in part the high level of air service and the relatively low level of train service. Windsor, which has the lowest level of air service of the three cities, also has the lowest proportion of travel by that mode and the highest proportion of rail and auto travel. The three cities along the Montreal-Windsor corridor, which have good rail service, (Montreal, London, Windsor) have the highest proportion of rail travel (17, 11 and 11 percent, respectively) and the lowest proportion of bus travel (5, 5 and 4 percent, respectively).

Generally speaking, the most widespread of the public modes, in terms of coverage, is bus, followed by rail, followed in turn by air. Of the 26 major Ontario communities included in an analysis by Transport Canada (1972) all had access to at least two modes, and 14 had service by the three public modes.

Except in the extreme northern areas, competition among the three public modes is intense in terms of both service levels and fares. The people of Ontario are, as a consequence, generally well served in terms of intercity passenger transportation. Evidence is presented in the report which indicates that, while air fares have risen to keep pace with increasing operating costs, rail fares have risen more slowly, drawing upon public financing of increasing deficits. As a result, bus companies have been forced to restrict fare increases in order to remain competitive, resulting in a cost-revenue squeeze for the bus mode which is not subsidized from the public purse.

This is a situation which the Province of Ontario should watch carefully, in terms of establishing policy and taking a position with relevant federal agencies. It is clearly in Ontario's interest to maintain and improve services by all three public modes, to the extent that they can be justified

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based on travel volumes; in the face of rising fuel prices and possible fuel shortages, this is particularly true for the bus and rail modes which are generally more energy efficient for the vehicle occupancies and trip lengths experienced in southern Ontario. Of these two modes, bus is the more widespread in terms of coverage, and would therefore be looked to more strongly in the event of significant fuel shortages affecting the use of private automobiles. It is clearly not in the interests of the Province to allow the intercity bus industry to be hurt at this time by undue price competition financed from the public purse, and more detailed study of this situation would appear warranted. The rail passenger mode is also extremely important in this context, but is limited by the available infrastructure to fewer corridors. As noted earlier, it is possible that modest increases in rail fares would reduce the financial pressure on bus companies, while allowing rail to maintain a substantial market share in the corridors which it now serves well.

INTERMODAL COMPETITION IN FREIGHT COMPETITION

There is substantial evidence, presented in this report and others, that intermodal competition for freight traffic is a pervasive force affecting most commodity movement in the Province. This is particularly true in terms of competition between rail and truck: the truck mode has captured increasing shares of manufactured and higher value commodities in the decades since the second world war, owing largely to its door to door flexibility and lower transit times, in spite of significantly higher rates. The rail mode has responded by introducing containerization and piggyback services which have stabilized the situation for such commodities and may reverse the trend if substantially higher fuel costs force proportionately greater freight increases by truckers.

Effective intermodal competition does not exist for shipments of major bulk commodities such as grain, coal, iron ore and forest products. Nevertheless, rates for bulk commodities showed a considerable decrease over the period from 1959 to 1974. This almost certainly reflects the impact of market competition combined with the productivity improvements achieved by the railways over this period.

Within Ontario, intermodal competition appears to be weakest in Northern Ontario. A 1975 survey by the Ontario MTC showed that shippers in North Western Ontario rely relatively heavily on private truck and rail for inbound and outbound shipments, owing to the relative lack of for-hire trucking services in these areas. In a 1978 MTC survey, this area had the highest rate of complaints by shippers about rail rates and service. While there are no data to show directly the impact of the lack of inter- and intra-modal competition on the service levels and rates experienced by such shippers, a number of sources record the perception of many northerners that the railway companies take unfair advantage of their position, both in terms of rates and services. On the other hand, the 1978 survey by McLaughlin mentioned

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earlier, showed 67 percent of its respondents in the Ontario mining and forestry industries reporting strong rail-truck competition on service quality and 62 percent reporting strong price competition. Further study would be required to determine objectively whether shippers pay more or experience lower service levels in cases where less competition prevails.

PUBLIC POLICY OPTIONS

As illustrated in Exhibit A, eleven policy options in the field of rail transportation are described and briefly assessed in the report as a possible means of addressing a number of the problems outlined in earlier sections of the report.

Of these, six of the policy options are considered to be unwarranted in terms of the likely benefits relative to costs, and four are suggested for further consideration. The five retained options, using the numbering system of Exhibit A, are as follows:

3. Improved Rate Appeal Procedures
6. Provincial Position on Branch Lines
7. Land Banking of Railway Rights-of-Way
10. Passenger Service Pricing
11. Promotion of Intra-Rail Competition.

The reasons for suggesting these policy options are discussed briefly below.

Improved Rate Appeal Procedures

While an appeal procedure exists now for shippers who are considered "captive" to the railway mode, it is rarely used, partly because of the difficulty of proving "captivity" and partly because of the time and cost involved in the appeal process. While, as noted in this report, we are strongly in favour of continuing rate-setting freedom by the railways, it is important that individual shippers not be subjected to gross inequities which may result from lack of transport competition or other factors. It would seem that a simpler appeal process could be devised which would allow captive shippers to state their case. While appeals could continue to be made to the Canadian Transport Commission, the Province may wish to consider in more detail various types of improved appeal processes, with the intent of suggesting to the CTC that it adopt a more equitable rate appeal procedure.

Provincial Position on Branch Lines

While it would not appear cost-effective for the Province to start paying subsidies to retain rail branch lines, it is suggested in this report that the provincial interest may not be well served by certain line abandonments,

EXHIBIT A
EVALUATION OF POLICY OPTIONS

POLICY OPTION	OBJECTIVE	ADVANTAGES	DISADVANTAGES
1. Government Ownership of Railway Track and Rights-of-Way	<ul style="list-style-type: none"> - to assist railways in remaining economically solvent 	<ul style="list-style-type: none"> - potentially introduces more competition to railway services - allows broader based decision-making 	<ul style="list-style-type: none"> - involves government in many detailed decisions - negates trade-offs between investment and operational costs
2. Rate Regulation	<ul style="list-style-type: none"> - to ensure fairness to all rail users 	<ul style="list-style-type: none"> - independent assessment of rates 	<ul style="list-style-type: none"> - potential growth of litigation - probable reduction of railway profitability
3. Improved Rate Appeal Procedures	<ul style="list-style-type: none"> - to enable captive shippers to appeal effectively railway rate proposals 	<ul style="list-style-type: none"> - independent assessment of rates when shipper is captive 	<ul style="list-style-type: none"> - reduction in railway profitability
4. Government Subsidy for Transportation to Inadequately Served Areas	<ul style="list-style-type: none"> - to ensure the provision of good transportation services to all areas 	<ul style="list-style-type: none"> - equity between various areas 	<ul style="list-style-type: none"> - high costs - assistance to all users whether needed or not
5. Provincial Branch Line Program	<ul style="list-style-type: none"> - to maintain rail service in cases of social or economic desirability 	<ul style="list-style-type: none"> - broader decision-making 	<ul style="list-style-type: none"> - high cost - government involvement in a new area
6. Provincial Position on Branch Lines	<ul style="list-style-type: none"> - to present the Provincial position in CTC abandonment hearings 	<ul style="list-style-type: none"> - present social and economic implications of abandonments 	<ul style="list-style-type: none"> - possibly ineffective
7. Land Banking of Railway Rights-of-Way	<ul style="list-style-type: none"> - to maintain integrity of rail rights-of-way 	<ul style="list-style-type: none"> - possible multiple uses of rights-of-way - compatibility with other Provincial policies 	<ul style="list-style-type: none"> - in most cases eventually decisions have to be made on retention
8. Short Line Railways	<ul style="list-style-type: none"> - to maintain branch line services 	<ul style="list-style-type: none"> - maintain service, but with private investment and operation 	<ul style="list-style-type: none"> - concept not proved
9. Government Provision of Risk Capital	<ul style="list-style-type: none"> - to ensure that railways have funds for desirable investments 	<ul style="list-style-type: none"> - relatively low risks 	<ul style="list-style-type: none"> - Canadian railways can already obtain most capital requirements themselves
10. Passenger Service Pricing	<ul style="list-style-type: none"> - to maintain financial viability of bus carriers 	<ul style="list-style-type: none"> - no direct government intervention 	<ul style="list-style-type: none"> - increased rail fares for consumers
11. Promotion of Intra-Rail Competition	<ul style="list-style-type: none"> - to encourage more competition between railways 	<ul style="list-style-type: none"> - improves services and rates to some shippers without direct government intervention 	<ul style="list-style-type: none"> - may impact on financial viability of railways

Mr. David S. Barrows

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bearing in mind anticipated energy shortages and the need to retain a viable transportation network. For this reason, it would be desirable that the Province carry out a systematic assessment of relevant branch lines which may be subject to abandonment hearings during the coming decade, to develop a position from the provincial perspective as to whether or not each line should be abandoned.

Land Banking of Railway Rights-of-Way

In some cases it may be determined that a line should be retained, in which case the Province would presumably intervene at the relevant CTC hearing to this end. If the intervention is not successful, however, the option of land banking of the rail right-of-way by the Province would appear to be an interesting policy option. Acquisition of the right-of-way should be possible at relatively low cost, and its retention by the Province would avoid its loss, such that the right-of-way could be reactivated if necessary at a later time for rail or other transportation purposes.

We therefore recommend that the Province consider carrying out a systematic assessment of relevant rail branch lines and assess the possibility of setting up a land banking program for retaining the rights-of-way of abandoned rail lines.

Passenger Service Pricing

As noted in this report, there is evidence suggesting that fare increases at less than the rate of cost inflation by the passenger rail mode, enabled by substantial public subsidies to keep fares low, have placed the intercity bus mode in a cost-revenue squeeze by forcing it to maintain artificially low fares in order to remain competitive. Since the bus mode receives no direct subsidies and, on the evidence available, pays enough road user taxes to cover its share of building/maintaining highways, this would appear to be inequitable. It is also a cause of potential concern to the Province if it should mean that intercity bus services would be reduced. This would be particularly counter-productive at this time in our history, when anticipated fuel shortfalls and price increases may require substantial upgrading of the public transportation modes.

For these reasons, we suggest that the Province should investigate in more detail the extent to which low rail fares are financially hurting the bus companies and the extent to which increases in rail passenger fares would be required to remove this problem. This study should include an assessment of the extent to which such rail fare increases, which would presumably be followed by commensurate bus fare increases, might affect the modal market shares for intercity passenger transport, under various fuel price scenarios. Based upon the findings of such a study, the Province would be armed with the necessary facts to take a position with the Canadian Transport Commission regarding lower limits on rail fares and their rates of increase, in the interests of maintaining the viability of the overall intercity passenger transport system.

Mr. David S. Barrows

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Promotion of
Intra-Rail Competition

As noted earlier, the existing interswitching distance of four miles, which has been in existence for over 70 years, effectively precludes many shippers from being able to negotiate with more than one railway in terms of rates and service. A number of authors have suggested that the interswitching distance should be increased, to allow more effective intra-rail competition, and we support this suggestion.

It is therefore recommended that the Province carry out a more detailed assessment of the numbers of shippers who would have access to more than one railway under various alternatives in terms of an increased interswitching distance. Such an assessment might be carried out for one part of the Province, for example, Metropolitan Toronto. Based upon the findings of this assessment, a decision could be made as to whether to take a position with the CTC regarding a change in the switching distance.

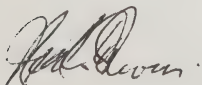
Another issue affecting intra-rail competition is the 30 percent customs tariff on goods carried by a competing U.S. railway between two points in Canada. While we are generally in favour of this regulation, as a means of maintaining the viability of Canadian railways, there may be specific instances in which the regulation should be relaxed in order to increase the level of intra-rail competition and provide greater service/rate choices to affected Canadian shippers.

We suggest that a small number of specific instances where this might be the case in Southern Ontario should be investigated in more detail, to determine whether a policy position on this matter should be taken in discussions with the Federal Government.

The subject of competition in rail transportation is a complex one which has been addressed at considerable length by many studies and reports. Of necessity, this report has been able only to touch on the major issues, drawing upon existing information sources. It is hoped that our findings and recommendations, as summarized above, will be of use to the Government of Ontario in its assessment of provincial rail policy options.

Yours sincerely

IBI GROUP



Neal A. Irwin
Managing Director.



Lee S. Sims
Director

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I - TRANSPORT SUBSIDIES

OVERVIEW

Federal, provincial and municipal governments all contribute toward the financing of transport services and infrastructure. The federal role includes responsibility for construction of airports, air navigation facilities and major ports, and the payment of direct subsidies to rail, road, water and air modes of transport. Provincial and municipal involvement extends mainly to the provision of highways and urban roads, urban transportation, local airports, and intra-provincial ferry services.

The most extensive work on subsidies is contained in reports by Dr. Z. Haritos of the Canadian Transport Commission and Transport Canada (1973, 1980). Haritos presents two comparisons of transportation costs and revenues for the various transportation modes. Exhibit 1 shows the first comparison, which is based on total costs and revenues (i.e. vehicles plus infrastructure). Costs include current costs (operation, maintenance and administration) and capital costs (depreciation and cost of capital). The deficits as a percentage of total costs for air, marine, road and rail in 1973 were 16, 22, 6 and 26 per cent respectively.

The second intermodal comparison in Exhibit 2 is restricted to infrastructure costs and revenues. Rail is not included in this comparison because total rail revenues cannot easily be separated into infrastructure revenues and vehicle revenues. The amount by which costs exceed revenues represents the level of indirect subsidy for each mode. User-derived revenues, as a percentage of infrastructure costs, increased over the 1968-1975 period for the

TOTAL TRANSPORTATION COST AND DEFICIT¹

CANADA - 1973

(In Millions of Dollars)

Mode	Infrastructure ² Cost (\$M)	Vehicle Cost (\$M)	Total Modal Cost (\$M)	Modal Costs As a Percentage of Total Transport Costs (Percent)	Deficit for Each Mode (\$M)	Deficit as a Percentage of Total Costs for Each Mode (Percent)
Air	354	1,163	1,516	6	243 ³	16
Marine	576	1,892	2,469	9	534 ⁴	22
Road	3,191	17,162	20,353	76	1,165 ⁵	6
Rail	661	1,771	2,548 ⁶	9	671	26
Total ⁶	4,813	22,073	26,886	100	2,614	10

1. Total may not agree due to rounding.

2. At a 6 percent rate of cost of capital; in 1973 prices.

3. Includes \$2.1 million in direct subsidies paid to regional air carriers.

4. Includes \$67.7 million in direct subsidies paid to Canadian for-hire water carriers.

5. Includes \$14.5 million in direct subsidies paid under the Atlantic Region Freight Assistance Act.

6. This figure in addition to rail infrastructure and vehicle costs also includes \$115.2 million of corporate taxes and regulating costs for 1973, for rail.

Source: This Table is an Update of Table 6 in Z. Haritos' "Transport Costs and Revenues in Canada", Journal of Transport Economics and Policy, Volume IX, No. 1, January 1975.

EXHIBIT 2ANNUAL TRANSPORT INFRASTRUCTURE COSTS AND REVENUES*

(millions of 1975 constant dollars)

	1968	1973	1975
<u>AIR</u>			
Annual Costs	340	436	516
Annual Revenues	95	137	192
Annual Indirect Subsidy	245	299	324
Percentage Cost Recovery	29%	11%	37%
<u>MARINE</u>			
Annual Costs	637	714	721
Annual Revenues	135	132	122
Annual Indirect Subsidy	502	582	599
Percentage Cost Recovery	21%	19%	17%
<u>ROAD</u>			
Annual Costs	3330	4310	4796
Annual Revenues	2391	2696	2805
Annual Indirect Subsidy	939	1614	1991
Percentage Cost Recovery	72%	63%	59%

Source: Transport Canada, Transportation Subsidies, June, 1980.

*These subsidy data are in the process of being updated further by Transport Canada and additional information will soon be available.

EXHIBIT 3DIRECT TRANSPORTATION SUBSIDIES AND
PAYMENTS BY THE FEDERAL GOVERNMENT

	<u>1974/75</u>	<u>1975/76</u>	<u>1976/77</u>	<u>1977/78</u>	<u>1978/79</u>
	(\$ millions current)				
<u>RAIL</u>					
Passenger	149.8	200.7	161.4	211.0*	285.3*
Freight	226.4	154.5	204.5	169.2	240.1
Railway Grade Crossing Fund	8.8	28.6	27.2	15.8	22.5
Total Rail	385.0	383.8	393.1	396.0	547.9
<u>ROAD</u>					
Total Road	44.4	55.5	69.3	90.2	135.4
<u>MARINE</u>					
Total Marine	166.4	174.8	149.1	177.1	147.6
<u>AIR</u>					
Total Air	13.1	10.7	11.1	12.7	15.6
<u>URBAN GRANTS AND CONTRIBUTIONS</u>	-	-	-	10.3	25.5
<u>ADMINISTRATION GRANTS AND CONTRIBUTIONS</u>	8.3	8.8	28.6	9.2	6.1
TOTAL SUBSIDIES AND PAYMENTS	617.2	633.6	651.2	695.5	878.1

*Includes contract payments to VIA Rail as well as subsidies to CN and CP. In all cases the amount of subsidy in each year reflects payments and is not in respect of actual losses in that particular year.

Source: Transport Canada, Transportation Subsidies, June 1980.

air mode but decreased for the road and marine modes. Nevertheless, road cost recovery was still the highest of the three modes (59¢ of every dollar spent in 1975). In absolute terms, road received the highest indirect subsidy (\$1991 million in 1975), followed by marine (\$559 million) and air (\$324 million).

The 1980 Transport Canada report provides information on the direct transportation subsidies and payments by the federal government from 1974/75 to 1978/79. Exhibit 3 summarizes these data by mode.

Aside from indirect subsidies to the road mode through provision of infrastructure, the Ontario Government subsidizes air, rail and marine services directly. The Province made payments to the Ontario Northland Transportation Commission (ONTC) for the operation of NorOntair, the Cochrane-Mosonsee branch rail line, main line passenger service and the Mosonsee ferry. Subsidies to ONTC for 1975-1978 are shown in Exhibit 4. In addition to these subsidies, the Ministry of Transportation and Communications pays the entire cost of various other ferry services which it operates in Ontario. The cost in the year ending March, 1979, which includes direct operating costs and infrastructure costs, was about \$2 million.

PASSENGER TRANSPORT

For passenger transport, levels of subsidy per passenger mile have been estimated for the air, rail and road modes. Over the period 1970 to 1974, subsidies to rail passenger services nationally ranged from 3.0¢ per passenger-mile to as high as 11.1¢. In 1974, the subsidy to both CN and CP was about 8.5¢ per passenger-mile. Passenger services in the Quebec-Windsor corridor lost from 8.2 - 52.4¢ per passenger-mile, with the overall average being 12.0¢.

EXHIBIT 4

PROVINCIAL SUBSIDIES TO ONTARIO NORTHLAND
TRANSPORTATION COMMISSION FOR TRANSPORTATION SERVICES

	1975	1976	1977	1978
	(\$ millions current dollars)			
Cochrane-Moosonee Branch Line	2.8	2.1	2.6	3.5
Main Line Passenger Train	2.1	2.2	2.2	3.3
Northlander	-	-	3.8	3.6
NorOntair	1.1	1.5	1.4	0.8
Moosonee Ferry	-	-	0.06	0.05

Source: Ontario Northland Transportation Commission, Annual Reports 1975, 1976, 1977, 1978.

Data for 1970-1973 shows that air travellers were subsidized from 2.01 to 2.59¢ per passenger-mile in current dollars, and from 1.92 to 2.59¢ in constant dollars (1971).

Using 1972 data, Transport Canada reported in 1975 that the private auto was subsidized 0.63¢ per passenger-mile and the bus passenger was subsidized very little, if at all.

Thus the range of subsidies to passenger transportation is quite wide, with rail and bus at the two extremes. The large difference between the subsidy levels suggests some extreme comparisons. For example, the loss per passenger-mile on the Montreal-Ottawa train service in 1977 was 28.4 cents. At a distance of about 110 miles between the two cities, this means the total loss per through passenger averaged \$31.24. Since there is virtually no subsidy for bus travel, it would have been cheaper for the federal government to give rail passenger free bus tickets (\$12.85 return in July, 1977) than to cover the loss on the rail service.

Such a comparison, when coupled with the complaint by bus operators that "predatory" rail pricing is forcing them to lose money on competing runs, raises the issue of whether it would not be more cost-effective to raise the rail fares substantially, thereby reflecting somewhat more realistically the cost of providing rail service, reducing somewhat the rail passenger subsidy required from the taxpayer and allowing the bus operators to remain profitable while charging competitive rates on such routes. This issue is addressed again in the final section of this report.

FREIGHT TRANSPORT

Federal subsidies to rail freight transportation are shown in Exhibit 3 as \$240.1 million in 1978/79. This total includes subsidies and payments for: unprotected branch lines; guaranteed branch lines; the At and East subsidy; the Maritime Freight Rates Act subsidy; and Transport Canada grants and contributions to the railways for revenue lost as a result of the railway rate freeze. The At and East subsidy and the Maritime Freight Rates Act subsidy totalled \$60.1 million in 1978/79. The former subsidizes rates on the shipment of grain to Maritime ports and the latter subsidizes rates on westbound and intra-Maritime shipments.

The two major components of the subsidy to marine transport are for ferry and coastal services on the west and east coasts of Canada; subsidies in 1978/79 were \$20.9 million to west coast services, and \$117.7 million to east coast services. These amounts should be divided among passenger and freight transport, but it appears that no one has attempted this allocation.

The federal government also subsidizes shipments of freight by truck. The Atlantic Region Freight Assistance Act extends to trucking the same subsidies as are given to rail for westbound and intra-Maritime shipments. The level of subsidy under this Act was \$41.3 million in 1978/79. The remainder of the federal subsidy to road (\$94.1 million) is for road strengthening and improvement programs in the Maritimes and the Prairie provinces and thus to some extent is an indirect subsidy to freight transport by road.

There appears to be disagreement between the two analyses located which discuss the extent to which truck transport of freight receives an indirect subsidy through the provision of infrastructure. In 1967 the Ontario Select Committee on Taxation reached the conclusion that "... the present revenue structure in Ontario tends to charge passenger vehicle and light truck owners less than the road costs they occasion, while the owners of heavy trucks and buses are more than meeting their cost responsibility."

A 1973 study by Haritos, using 1968 data, concluded that while buses paid more than their economically efficient share of road costs, passenger cars and trucks paid less than their efficient share. There are several differences in the assumptions underlying the two analyses which account for the different conclusion regarding trucks. One key assumption by the Select Committee is that road users should only have to cover 65 to 75 percent of road costs, owing to the fact that non-users receive benefits from the road system. Haritos' analysis allocates total road costs to users only.

The results of both studies indicate, however, that the trucking industry does not pay its proportionate share of the cost of providing road infrastructure, whether it is justifiable or not, in contrast to the rail system which, except for the exceptions noted above does. In addition both trucking companies and rail carriers pay fuel taxes (at different rates) but in return truckers are provided with road facilities, partly out of the proceeds of these taxes; the benefits received by railways from these taxes are harder to determine.

II - INTRA-RAILWAY COMPETITION

LITERATURE REVIEWED

Three sources which examine the nature of competition between the railways in freight movement have been reviewed. A 1977 monograph and two papers (1979, 1980) by Heaver and Nelson and some recent analysis by the Canadian Transport Commission examine this issue in depth. Another CTC report (McLaughlin, 1978) provides some insight into the view of bulk freight shippers on competition between the railways. The major findings and conclusions of all three sources are reviewed in some detail in the Appendix, and are summarized here.

FINDINGS

Heaver and Nelson conclude that there is actually considerable competition between the railways, though the emphasis is more on service competition than rate competition. The complaints voiced by shippers dependent on only one railway are, in a reciprocal sense, evidence of the merits of two or more railways. Intramodal competition extends over the border with American railroads, adding competitive alternatives for shippers in a number of instances.

They cite four constraints on competition between the railways, two legislative and two regulatory. Section 279 of the Railway Act gives the railways in Canada the right to agree upon and charge common rates, which allows for and, indeed, even suggests the likelihood of reduced rate competition. Section 382 of the Act, which subjects goods carried by rail

between points in Canada over lines in the U.S.A. under combination rates, as opposed to joint rates, to a 30% customs tariff, reduces the probability of American lines competing with Canadian lines.

The regulatory constraints on competition are interswitching limits and rates and the setting of through routes and joint rates.

Heaver and Nelson define interswitching as "... the movement of car-load freight by the terminal carrier between the point of loading or unloading on such terminal carrier's tracks and the point of interchange with the line-haul carrier". The current interswitching rates and regulations* apply only within four miles of an interchange point, a limit which was set in 1907. The rates themselves have been changed only once since 1918 when a 50 percent increase was granted in 1951. Overall, the authors conclude that the interswitching rates and regulations are "no longer consistent with the efficient working of a competitive rail system". They compel the railways to provide a service at an unremunerative rate, and the distance limit of four miles leaves many shippers with access to only one railway, even in urban areas which are served by both CN and CP.

The most direct rail route between two points often involves two or more rail carriers. Shippers have sought to have the railways forced to quote joint rates over the most direct routes in order to obtain the lowest overall rates. The position of the Board of Transport Commissioners has been that if one carrier has a route over its own rails, which is "reasonable and practicable", joint tariffs are not required. This has meant that in some cases

*Given in General Order T-12 issued by the Board of Transport Commissioners

discriminatory pricing has been allowed. For example, a shipper in Vancouver restricted to the CN may pay more for a shipment to Calgary than a shipper with access to the CP, even if the former shipper is closer to Calgary as measured along a direct route. CN's route to Calgary via Edmonton is regarded as being "reasonable and practicable". In Northern Ontario shippers sending goods to northern U.S. markets must pay a rate based on a circular route through Toronto instead of for a much shorter route via Fort Francis or Sault Ste Marie.

Heaver and Nelson conclude that the railways' practice of agreeing upon and charging common rates, as allowed under Section 279 of the Railway Act, does not eliminate all competitive rivalry between the railways. They note that rail-rail rate competition may be difficult to observe, since any rate rivalry takes place in the confidential discussions of the railways, rather than in the public arena of published rate schedules. The authors suggest that the effects of some restrictions on the railways' common rate-making practices be investigated, since the results of more open rate competition are far less likely to become ruinous today than in the past.*

The 30 percent customs duty on goods moving between points in Canada over lines in the U.S.A. under combination rates severely restricts competition between Canadian and American railways, although there are some cases in which Canadian rates can be explained by the influence of competitive rates in the U.S.A. In the case of the movement of canned goods from the Niagara peninsula, where American railways are present, the canned goods rates on American carriers influenced the Canadian rates into points close to the border. The difference

* The reason for this is that Canadian and American railways operate their mainline systems at levels far closer to full utilization than in earlier times, with the result that the gap between marginal and average costs has been significantly lessened.

between rates on movements from Eastern Canada to Calgary and to Edmonton can be explained in terms of the competitive influence of American rail carriers plus trucking from Montana to Calgary. The same competitive influence does not extend as far as Edmonton, and the rail rates to that city are consequently higher. Heaver and Nelson suggest that the Canadian Transport Commission be given some power to waive the 30% tariff if this were found to be in the public interest.

The recent analysis by the CTC concludes that rate and service competition between the railways in Canada is limited, and cites the four mile interswitching limit and the railways' common rate-making as the major constraints. Like Heaver and Nelson, the analysis also concludes that the potential for service competition is greater than for rate competition. Nevertheless, both market* and intermodal competition have largely prevented either railway from acting individually as an effective monopoly or together as a duopoly. The analysis concludes that removal of Section 279 of the Railway Act may benefit some shippers only at the expense of others and may do little in the way of increasing competition.

The growth over the last decade in the proportion of railway traffic shipped by resource industries means that a greater proportion of railway traffic is traffic which has access to only one carrier and hence is not subject to intra-modal rail competition.

The 1978 CTC report by McLaughlin summarizes the perception of shippers in Ontario's mining and forestry industries on the existence of price and service quality competition between the railways. Slightly less than one-third of the shippers reported strong rail-rail competition on service quality,

*Market competition is the constraint placed on the value of transportation service by competition between alternate sources of supply of a commodity, or between a commodity and substitute commodities.

EXHIBIT 5RAIL SERVICE IN ONTARIO TOWNS AND CITIES

2,000 pop.

Region \ # of Railways					
	0	1	2	3	4
Eastern	1	13	12	-	-
Central	3	32	37	1	-
Southwestern	-	21	16	3	1
Northeastern	1	19	5	1	-
Northwestern	-	6	1	-	-

while just over one-quarter reported strong price competition. In both cases rail-rail competition was perceived to be much weaker than either truck-truck or rail-truck competition.

Exhibit 5, opposite, shows the number of towns and cities with a population of more than 2,000 in 1976 in Ontario served by 0, 1, 2, 3, or 4 railways. In Eastern, Central, and Southwestern Ontario about as many cities are served by two railways as are served by only one. In Northern Ontario, however, most communities have service by only one rail carrier. There are only five towns or cities greater than 2,000 population which have no rail service, and six which are served by more than two carriers.

SUMMARY

None of the reports reviewed addresses directly the question of whether or not shippers with access to only one railway are faced with generally higher rates or worse service than with access to more than one railway. The conclusion that the four mile interswitching limit is too restrictive does imply, however, that shippers benefit in some way from having access to two or more railways. In the absence of changes in the current common rate-making procedures this benefit would probably be mainly in the form of greater service competition.

Market competition is independent of the number of railways serving a shipper, and thus where it occurs the rates charged the shipper who is captive to one railway may be constrained at a level no higher than those charged shippers with competitive alternatives. The extent to which this is the case in Ontario cannot be determined from current published reports.

The negotiation and determination of railway rates is a very complex process involving, on both sides, such influences as intramodal competition, intermodal competition, market competition, volumes, seasonal patterns, and other considerations. A definitive study to determine the extent to which any one of these considerations influences railway rates would be a difficult and complex undertaking. None of the studies reviewed in the course of this project explicitly answer this question. Interviews with shipper representatives indicates that they thought all of the factors listed above are perceived to have an effect but the relative magnitude of each is not known. Intra-rail competition, however, was seen as having some impact on rail rates with perhaps more impact on the level of service provided.

EXHIBIT 6

1972 PUBLIC TRANSPORT MODAL FREQUENCY

NODE	POP'N.	/----BUS---/			/---RAIL---/			/----AIR---/			/--ALL MODES/		
		OUT	IN	TOT	OUT	IN	TOT	OUT	IN	TOT	OUT	IN	TOT
34 CORNWALL	47116	98	98	196	42	42	84	0	0	0	140	140	280
35 OTTAWA/HULL	602510	365	365	730	92	85	177	250	262	512	707	712	1419
36 BROCKVILLE	19765	67	67	134	63	63	126	0	0	0	130	130	260
37 KINGSTON	85877	193	193	386	48	48	96	0	0	0	241	241	482
38 BELLEVIL/TRENTON	63778	48	48	96	54	47	101	0	0	0	102	95	197
39 PETERBOROUGH	63531	105	105	210	7	7	14	0	0	0	112	112	224
40 OSHAWA/WHITBY	120318	320	320	640	47	48	95	0	0	0	367	368	735
41 TORONTO/MISSISSA	2628043	1152	1152	2304	214	220	434	877	899	1776	2243	2271	4514
42 HAMILTON	498523	618	618	1236	126	126	252	266	279	545	1010	1023	2033
43 ST CATHS/NIAGRA	280316	309	309	618	21	21	42	0	0	0	330	330	660
44 KITCHENER/WATERL	226846	209	209	418	51	51	102	0	0	0	260	260	520
45 LONDON	286011	149	149	298	158	166	324	67	62	129	374	377	751
46 SARNIA	78444	26	26	52	28	20	48	6	10	16	60	56	116
47 CHATHAM	35317	62	62	124	56	56	112	0	0	0	118	118	236
48 WINDSOR	258643	58	58	116	28	28	56	56	53	109	142	139	281
49 HARRIE	38176	186	186	372	32	32	64	0	0	0	218	218	436
50 PEMBROKE	16544	69	69	138	28	28	56	10	10	20	107	107	214
51 NORTH BAY	49187	130	130	260	58	58	116	33	33	66	221	221	442
52 SUDBURY	155424	98	98	196	52	49	101	69	61	130	219	208	427
53 SAULT STE. MARIE	81270	55	55	110	7	7	14	46	32	78	108	94	202
54 F ERIE/WELLAND	23113	116	116	232	7	7	14	0	0	0	123	123	246
55 KIRKLAND LAKE	27427	70	70	140	14	14	28	18	24	42	102	108	210
56 TIMMINS	28542	45	45	90	7	7	14	27	27	54	79	79	158
57 KAPUSKASING	12834	28	28	56	27	13	40	0	0	0	55	41	96
58 THUNDER BAY	112093	54	54	108	17	17	34	61	42	103	132	113	245
59 WINNIPEG/SELKIRK	549593	136	136	272	46	54	100	251	249	500	433	439	872
60 PORTAGE LA PRAIR	12950	133	133	266	51	42	93	0	0	0	184	175	359
61 BRANDON	31150	108	108	216	30	33	63	10	10	20	148	151	299
62 THOMPSON	19001	14	14	28	5	6	11	20	13	33	39	33	72
63 KENORA	10952	47	47	94	14	14	28	15	15	30	76	76	152

III - INTERMODAL COMPETITION IN PASSENGER TRANSPORTATION

LITERATURE REVIEWED

Four reports provide information on the extent of competition between rail, air and bus in providing passenger transportation in Ontario: Transport Canada (1975), IBI Group (1977), Transport Canada and Ontario MTC (1979), and Canadian Transport Commission (1979).

FINDINGS

The 1975 Transport Canada study concluded that, overall, intermodal passenger competition is limited, but is most intense in the short to middle distance ranges. On trips of greater than 500 miles, the great time-saving advantage of air travel over surface modes allows the airlines to command a much greater share of the market than bus or rail. Within the 200-500 mile range, however, bus, rail and air are reasonably competitive with one another. As distances get smaller, the time advantage of air travel shrinks and the difference between air fares and surface fares increases.

The potential for intermodal competition is restricted by the extent of service of the three modes. The Transport Canada report included a table showing the frequency of service for each mode at major communities across Canada in 1972. The Ontario portion of the table, which includes the 26 largest cities in the province, is reproduced here as Exhibit 6. Of the 26 communities, all had access to bus and rail, and 14 had service by bus, rail, and air. Throughout southern Ontario, bus offers the most extensive service, followed by rail and air.

The 1977 IBI Group report provides information on modal access for communities in northern Ontario. South of Latitude 50°N most major communities are served by all three modes, though some are limited to two. For example, Elliot Lake is served by bus and air but not rail, while Hearst is served by bus and rail but not air. Overall, rail offers the most extensive service followed by bus and air. Communities served by all three include:

Kenora	Thunder Bay	Kapuskasing	Sudbury
Fort Frances	Wawa	Timmins	North Bay
Dryden	Sault Ste Marie	Kirkland Lake	Earlton
Atikokan	Chapleau	Elliot Lake	

North of 50° latitude, however, access to passenger services is much more limited. About one-third of the communities have rail service, slightly less than 20 percent are served by "third-level" air carriers, one is served by NorOntair, and only two have access to bus service.

The 1979 Transport Canada report provides data on modal shares in passenger transportation in southern Ontario. Intercity travel within this area generally consists of trips shorter than 500 miles and thus all three modes have an opportunity to be reasonably competitive with one another. The three public modes are, however, dominated by the private auto which has about 64 percent of the total market between Toronto and 6 urban centres. Air serves 18 percent of the total market between these same city pairs, and captures as much as 37 percent on individual routes (Montreal-Toronto). Rail and bus carry on average less than 20 percent of the passengers between Toronto and these 6 other cities. Rail has a larger share than bus in the Montreal-Windsor corridor, but a lower share on other routes such as Toronto-Ottawa and Toronto-Sudbury.

EXHIBIT 7

MODAL SHARE OF INTERCITY TRAVEL
FOR 6 CITY PAIRS
1976

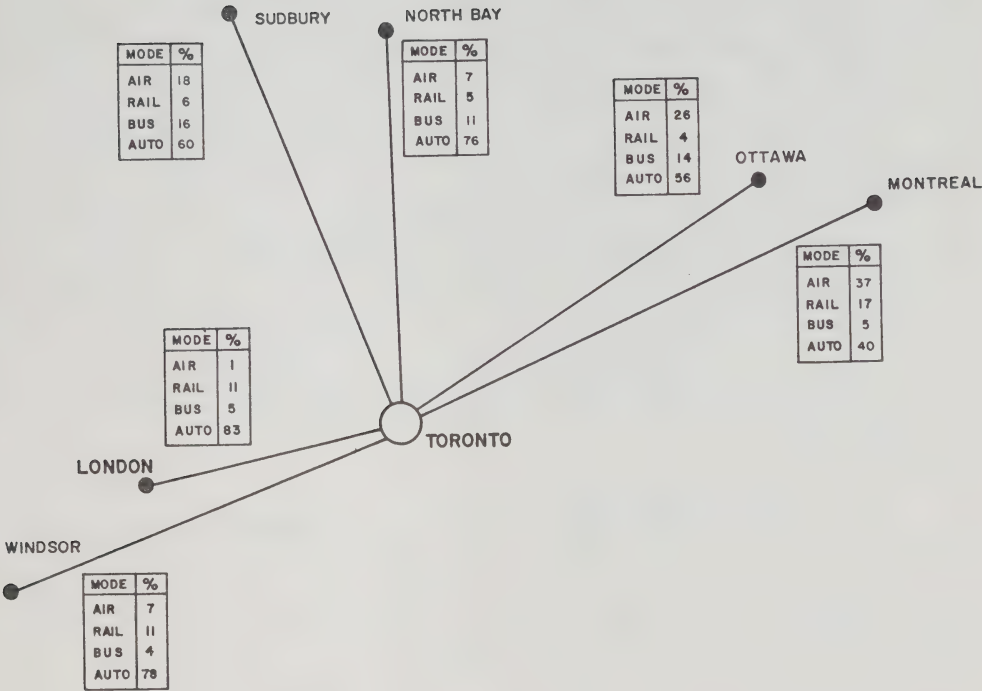


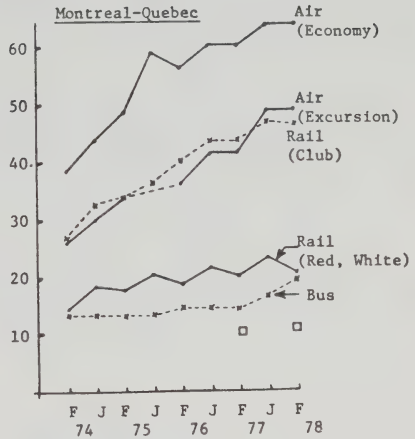
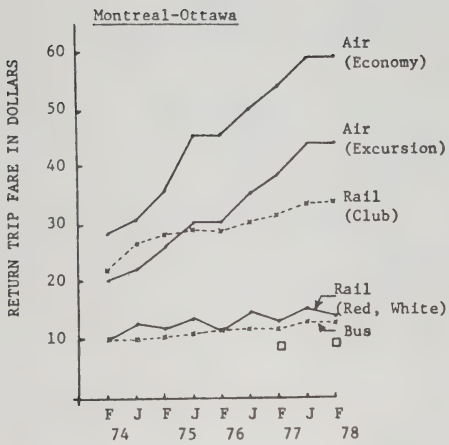
Exhibit 7, opposite, shows the modal shares for each of the 6 city pairs. These figures by themselves tell a great deal about the relative levels of service offered by the various modes. For example, Ottawa, Sudbury and Windsor are about equidistant from Toronto (240 miles), yet the modal shares of travel between them and Toronto are quite different. Ottawa has the highest proportion of air travel and the lowest by rail, reflecting, in part, the high level of air service and the relatively poor level of train service. Windsor, which has the lowest level of air service of the three cities, also has the lowest proportion of travel by that mode and the highest proportion of rail and auto travel. The 3 cities along the Montreal-Windsor corridor, which has good rail service, (Montreal, London, Windsor) have the highest proportions of rail travel (17, 11 and 11 percent respectively) and the lowest proportions of bus travel (5, 5 and 4 percent respectively).

The degree of competition between modes is reflected not only in the factors of service frequency and travel times, but also in fares. The Canadian Transport Commission (1979) report contains a comparison of rail, air and bus fares between 6 city pairs in the Quebec-Windsor corridor from 1974-78.

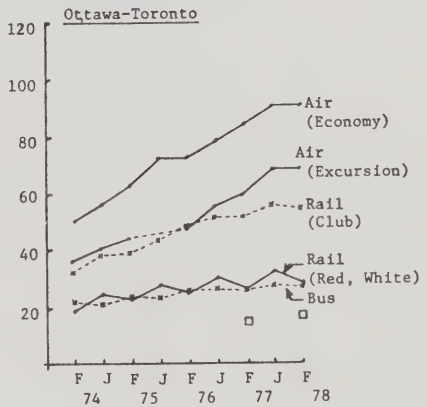
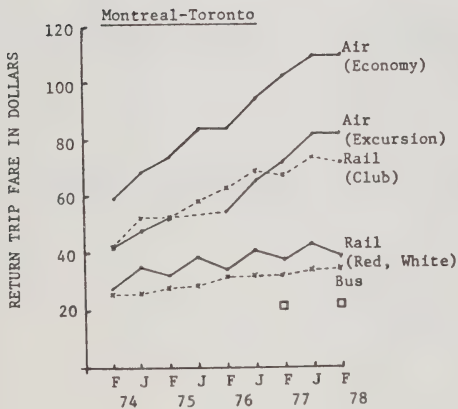
In general, bus fares matched CN Red fares and were less than CN White fares, except on the Montreal-Quebec route where until February, 1978 bus fares were lower than both types of rail fare (up to 25 percent lower than Red fares). The introduction of the Blue plus 10 percent plan in 1976 reduced return trip rail fares to as much as 30 percent less than comparable bus fares. For the most part, CN Club fares were higher than excursion air fares, but economy air fares exceeded Club fares in all cases by a substantial amount. Exhibit 8 illustrates the fare comparison over the years 1974-78.

EXHIBIT 8

COMPARISON OF 1974-1978 RAIL, AIR AND BUS FARES



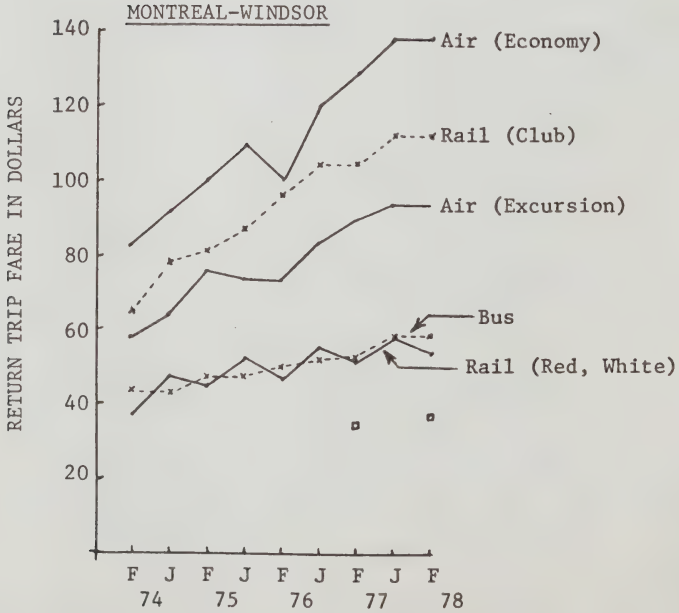
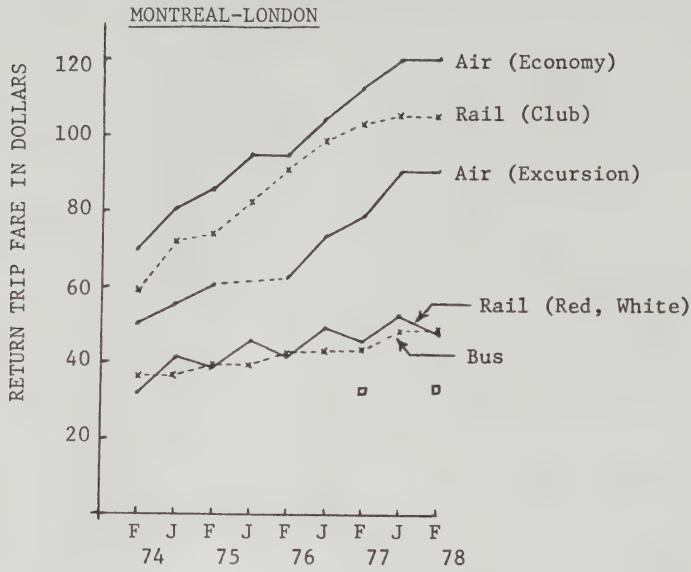
No air excursion fares for July 1975.



□ CN Blue Fare plus 10 percent.

EXHIBIT 8
(continued)

COMPARISON OF 1974-1978 RAIL, AIR AND BUS FARES



□ CN Blue Fare plus 10 percent.

EXHIBIT 9RETURN TRIP FARES, JULY 1980

	MONTREAL- OTTAWA	MONTREAL- QUEBEC	MONTREAL- TORONTO	OTTAWA- TORONTO	MONTREAL- LONDON	MONTREAL- WINDSOR
<u>VIA Rail</u>						
Regular Fare	20.00	28.00	52.00	44.00	68.00	80.00
3-Day Excursion	13.00	18.00	34.00	29.00	45.00	53.00
Club Fare	35.00	43.00	77.00	59.00	99.00	111.00
<u>Air Canada</u>						
Economy	88.00	96.00	142.00	126.00	158.00	178.00
Weekend Excursion	66.00	72.00	107.00	95.00	119.00	134.00
<u>Voyageur Colonial</u>						
Regular Fare	14.80	23.20	41.90	37.30	60.20	75.00
3 or 5-Day Excursion			29.95	27.50	41.95*	52.95*

*5-day excursion on Montreal-Toronto portion, 3-day on remainder.

Source: VIA Rail, Air Canada and Voyageur Colonial information services,
July 7, 1980.

In 1980, bus fares between these 6 city pairs are less than rail fares, ranging from about 5-25 percent less for regular fares, but only about 0-10 percent less on excursion fares. Air fares, both excursion and economy, are a minimum of about 20 percent higher than rail Club fares. Current return trip fares are shown in Exhibit 9, opposite.

The CTC analysis also provided indices of relative fare charges for the rail mode compared to the air and bus modes. Increases in rail fares exceeded the increases in air and bus fares during 1972-74 by amounts ranging from 5-20 percent. Increases in air fares have exceeded rail fare increases since the onset of rapidly rising oil prices in 1973. In 1973 bus fares increased relative to rail fares for all city pairs, but this was reversed in 1973-75 when rail fares rose sharply relative to bus fares. From 1975-77 bus fares increased relative to rail fares, although over the 1972-77 period as a whole rail fares increased by an average of about 12 percent more than bus fares for the 6 city pairs, thus adding a competitive advantage to bus transport. From July, 1974 to July, 1980, however, percentage increases in bus fares were on average about 3 percent more than rail fare increases.

The greatest net increase in air fares relative to rail fares occurred on the short-haul Montreal-Ottawa route. For longer routes the relative increase in air fares was much less; which suggests the incentive to shift from air to rail has been greatest on the short routes.

SUMMARY

The extensive coverage of bus routes in southern Ontario means that the rail mode faces competition from the bus on all rail routes. The reverse is not

true, however, as there are many bus routes without rail competition. In the heavily travelled Quebec-Windsor corridor, competition between bus and rail appears quite intense; the modal share data shows rail to attract the greater share of the passenger market in this corridor, though bus has the greater share outside the corridor where the level of rail service is lower. Within the corridor bus and rail fares are competitive with one another, with the bus having some advantage in all cases. Air fares are substantially higher than bus or rail fares on all routes. In northern Ontario, rail service is more extensive than bus or air service. South of Latitude 50°N , however, most major communities are served by all three. North of 50°N , public passenger transport is overall less accessible. Rail and air are the dominant modes in this area.

IV - INTERMODAL COMPETITION IN FREIGHT TRANSPORTATION

LITERATURE REVIEWED

Intermodal competition in freight transportation, particularly between rail and truck, is perhaps the most widely addressed of the topics covered in this paper. Transport Canada (1975), Heaver and Nelson (1977), Scott (1978), Taylor (1979), and Wolff and Kuczer (1979) examine the issue from a general, national perspective, while McLaughlin (1978), Ontario MTC (1975, 1979), IBI Group (1977), Ontario MIT (1980) provide data specific to Ontario.

FINDINGS

The main conclusions of Heaver and Nelson with respect to intermodal competition in transport markets since 1967 are that the McPherson Commission was correct in viewing it as a pervasive force affecting most commodity movement and that the Commission was also correct in recommending the railways be given wide freedoms to set freight rates. The evidence of the case studies, and of other published studies, suggests that the reach of trucking competition has continued to increase since 1967.

The ability of the railways to respond to intermodal competition has been important in enabling them to react immediately to competitive pressures and, thereby, retain profitable traffic, which might otherwise have been lost. It has also been important to shippers, as they have been able to use intermodal alternatives (both actual and potential) to gain reductions in rail rates and to stimulate the railways to more efficiency, both by reducing costs and rates and by improving services.

The authors note that it is not possible to measure quantitatively the extent to which intermodal competition influences railway rates and services. In part, this is because of the inadequacies of Canadian transport statistics, but more importantly it is because of the nature of dynamic competition in transport.

Effective intermodal competition does not exist for shipments of major bulk commodities such as grain, coal, potash, and sulfur. Nevertheless, rates for these commodities are restrained by market competition. In fact, Heaver and Nelson found that market competitive forces apply throughout Canada to both raw materials and finished goods, though they were easier to identify in the case of raw materials sold in world markets.

W. G. Scott (1978), General Manager of Pricing Economics for Canadian Pacific Railways, states that market competition is a much more effective regulator of freight rates than is intermodal competition. Commodity rates, he says, are by far the lowest rates in the rail freight rate structure, other than statutory grain rates.

R. B. Taylor (1979), Director of Transportation for the Canadian Manufacturers' Association, states that competition for bulk commodity or carload/truckload shipments is generally aggressive in the industrially developed regions of Canada, though shippers who are captive to the rail mode need greater pricing protection. Shippers with less than carload/truckload volumes find less competition between modes, and price or service competition between the carriers in a particular mode frequently appear to be non-existent.

Shippers of small shipments (a few hundred pounds or less) have the

greatest number of competitive alternatives, including railway express, courier services, the Post Office, parcel carriers and air freight.

At the national level, the amount of rail traffic moving under rates which have been set in response to competitive forces has steadily increased, going from 11 percent in 1951 to 52.5 percent in 1976 as a proportion of total ton-miles, and from 13 percent to 71.3 percent as a proportion of total revenue. On both a revenue and ton-mile basis, the highest proportion of freight shipped under competitive rates (1972 data) was from Eastern to Western Canada at 89.6 percent (revenue) and 92.5 percent (ton-miles). The matching figures for shipments within Eastern Canada (Ontario and Quebec) were 80.8 percent and 76.6 percent.

Another measure of the intensity of competitive pressures on the railways is the rate of increase of rail rates. From 1959 to 1976 the railways' average revenue per ton-mile dropped from 1.35¢ to 0.67¢, expressed in constant dollar (1949 = 100). The greatest proportion of the decline occurred in commodity rates, both competitive and non-competitive. This drop in real average revenue should not be construed, however, as totally a result of competitive pressures, as over this period the railways have experienced losses of higher revenue general cargo traffic to trucking, a rapid increase in the volumes of bulk commodities carried, and significant increases in the productivity of bulk commodity carriage.

Within Ontario, intermodal competition would appear to be weakest in northern Ontario. A 1975 survey by the Ontario MTC showed that shippers* in northwestern Ontario rely relatively heavily on private truck and rail for

*The survey sample covered 20 industrial classifications, SIC20 - SIC39

EXHIBIT 10

PERCENT OF WEIGHT CARRIED BY VARIOUS TRANSPORT MODES
(PROVINCE)

<div>Mode</div> <div>% of weight Carried</div>	Common Carriers (Truck)		Private Carriers (Truck)		Rail	
	Inbound	Outbound	Inbound	Outbound	Inbound	Outbound
	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)
None	29 (19.3)	24 (16.0)	105 (70.0)	94 (56.0)	92 (61.3)	82 (54.7)
1 - 49 %	16 (10.7)	39 (26.0)	20 (13.3)	29 (19.3)	20 (13.3)	38 (25.4)
50 - 100 %	84 (56.0)	79 (52.7)	17 (11.3)	29 (19.3)	15 (10.0)	22 (14.6)
N.A.	21 (14.0)	8 (5.3)	8 (5.3)	8 (5.3)	23 (15.4)	8 (5.3)
Total	150 (100.0)	150 (100.0)	150 (100.0)	150 (100.0)	150 (100.0)	150 (100.0)

N.A. - data not available

EXHIBIT 11
OTHER MODES OF TRANSPORT USED*

<u>Mode</u>	<u>No. of Firms</u>	
	<u>Outbound</u>	<u>Inbound</u>
Parcel Post	10	-
Air	6	1
Water	2	4
Piggyback	3	-
Forwarders	6	1
Pipeline	1	-

*Strictly speaking, only air, water, pipeline can be regarded as "other modes".

EXHIBIT 12RANKING OF TRANSPORT PRICES AND SERVICE CHARACTERISTICS
BY SHIPPERS IN ONTARIO MINE AND FORESTRY INDUSTRIES

	<u>% of Respondents</u>		
	<u>All Modes</u>	<u>Rail</u>	<u>Truck</u>
<u>Price Is</u>			
Impediment to Sales	18.2	21.6	11.4
Too High	32.5	46.0	20.0
Fair	49.3	32.4	68.6
<u>Reliability Is</u>			
Unsatisfactory	8.8	13.5	0.0
Poor	22.5	37.8	10.3
Good	68.7	46.6	89.7
<u>Quality Is</u>			
Unsatisfactory	2.6	0.0	0.0
Poor	16.9	31.4	5.4
Good	80.5	68.6	94.6

p.36 and pp.40-41

inbound and outbound shipments. In a 1978 MTC survey, this area had the highest rate of complaints by shippers about rail rates and service. Exhibits 10 and 11 summarize the use of the various transport modes by the 1975 sample of shippers.

A report by IBI Group (1978) showed that many communities north of Latitude 50°N are served by only one freight transport mode, and in many cases by only one carrier. While there are no data to show directly the impact of the lack of inter- and intramodal competition, the IBI report recorded the perception of many northerners that the railway companies take unfair advantage of their position, both in terms of rates and services.

The 1978 survey by McLaughlin, mentioned in a previous section, had 67 percent of its respondents in the Ontario mining and forestry industries reporting strong rail-truck competition on service quality and 62 percent reporting strong price competition. These are, however, only the perceptions of shippers and not objective measures of the intensity of intermodal competition. Exhibit 12, opposite, shows how these shippers ranked rail and truck on price, reliability and service.

RATE APPEAL PROCEDURES

There are two avenues through which shippers can appeal railway rates. Shippers who are captive to rail, and thus who do not benefit from actual intermodal competition, can apply to the Canadian Transport Commission under Section 278 (1) of the Railway Act, which states:

"278. (1) A shipper of goods for which in respect of those goods there is no alternative, effective and competitive service by a common carrier other than a rail carrier or carriers or a combination of rail carriers may, if he is dissatisfied with the rate applicable to the carriage of those goods after negotiation with a rail

EXHIBIT 13

SECTION 23 CASES DECIDED BY
THE CANADIAN TRANSPORT COMMISSION
1967-1980

	<u>Applicant</u>	<u>Date of Initial Application</u>	<u>Date of CTC Decision</u>
1.	Anglo-Canadian Pulp and Paper Mills Limited et al*	May 7, 1970	March 25, 1977
2.	Saskatchewan Wheat Pool et al (the Rapeseed Case)	October 14, 1970	June 27, 1973
3.	Bateaux St. Maurice Inc.	May 24, 1977	September 22, 1977
4.	B.C. Forest Products Limited et al (the Disparities Case)**	August 23, 1977	August 17, 1979
5.	Columbia Containers Limited	March 13, 1978	October 24, 1978

SECTION 23 CASES DISCONTINUED BY THE APPLICANT
1967-1980

	<u>Applicant</u>	<u>Date of Initial Application</u>	<u>Date of Discontinuation</u>
1.	Prince Albert Pulp Co. Limited	August 24, 1970	February 21, 1975
2.	Kootenay - Columbia Timber Co.	April 6, 1971	January, 1975
3.	Asbestos Eastern Transport Inc.	September 27, 1971	November 26, 1971
4.	Neptune Terminals Limited	July 27, 1972	August, 1972
5.	Cansulex	March 26, 1976	November 11, 1977
6.	McIntyre Mines Limited	May 3, 1976	December 27, 1978
7.	Canadian Cellulose Co. Limited	August 26, 1976	April, 1978
8.	Robert Richer Inc.	June 22, 1977	July 29, 1977
9.	Quebec Lumber Manufacturers Association	December 27, 1978	February 1, 1979

* Often referred to as "The Newsprint Case" this Section 23 application involved all newsprint producers in Canada.

** The decision in this case has been appealed in a federal court. A companion Section 23 application, The Incentives Case, which involves railway incentive rates has not been heard pending the final outcome of the Disparities Case. The Incentives Case involves pulp and paper producers across Canada, while the Disparities Case involves only Western producers.

carrier for an adjustment of the rate, apply to the Commission to have the probable range within which a fixed rate for the carriage of the goods would fall determined by the Commission; and the Commission shall inform the shipper of the range within which a fixed rate for the carriage of the goods would probably fall."

Section 23 of the National Transportation Act replaced Section 317 of the Railway Act which had enabled shippers to appeal rail rates on the grounds of unjust discrimination. Section 23 requires shippers to demonstrate a prima facie case of injury to the public interest before a consideration of redress can be obtained from the CTC. The Act does not limit the definition of the public, nor is Section 23 limited to rates, but also applies to any act or omission of a carrier.

Section 23 is apparently the most likely route for shipper appeals. Since the enactment of the National Transportation Act in 1967, the Canadian Transport Commission has decided only five Section 23 cases. With the exception of the Anglo-Canadian case, all were decided in favour of the applicant. A further nine formal applications which were made during this time were discontinued prior to a hearing. The Anglo-Canadian case concerned all newsprint producers in Canada and this involved major manufacturing interests in Ontario. A companion case to B.C. forest Products et al, which is still pending, also involves the pulp and paper companies in Ontario. Of the nine discontinued applications, none involved Ontario interests directly, although Ontario did intervene in the McIntyre Mines application. Exhibit 13 lists the applications heard or discontinued. In addition to the formal applications there have been hundreds of informal ones which have subsequently been resolved in some way between the shipper and carrier without initiation of formal proceedings.

There has been only one case in which a shipper, Domtar Limited, has applied to the CTC under the provisions of the maximum rate section (Section 278). The application was withdrawn, as the rate issue was resolved commercially.

This record of cases has led Heaver and Nelson (1980) to conclude that:

"... The various types of competition and rate negotiation appear adequate for setting most railway rates to competitive and economic levels, and for settling most rate issues between shippers and the railways. Even the discouragement of the regulatory costs and delay associated with a Section 23 case would not have made the record of cases so sparse if there had been significant difficulty in reaching rate accords between shippers and railways."

Nonetheless, there is still wide support among shippers for revisions to both Section 278 and Section 23. Some groups criticize the maximum rate standard for fixed rates and the definition of a "captive shipper" as not affording them sufficient protection from excessive rates when they have no reasonable alternative mode of transport available. Also, there have been many complaints that the regulatory procedures for appeals under the two sections are "too cumbersome, slow, costly, and uncertain of results" (Heaver and Nelson, 1977).

Possibly in response to this criticism the CTC, in 1978-1979, has made it easier for shippers to establish a prima facie case for an investigation and decision. Despite the changes, shippers, carriers, and representatives of provincial and federal governments are still expressing dissatisfaction with the slow and costly nature of the proceedings. At a recent annual meeting of the Canadian Industrial Traffic League, CP Rail proposed an arbitration procedure,

though there was apparently no consensus among the various parties as to the desirability of such a procedure in place of the current Section 23 requirements.

The recent CTC analysis cited earlier concluded, however, that proposals to place a time limit on rate appeal procedures and to institute rate arbitration would have no particular advantage over the current procedures.

SUMMARY

There appears to be little objective analysis of the extent to which the lack of effective intermodal competition leads to higher rates or worse service for shippers. The reports reviewed do show, however, that most shippers perceive the absence of competition to result in their being charged higher rates and/or receiving poorer service than would be the case in a competitive situation. Further studies would be required to determine the validity of these views.

The 1975 MTC study showed that there is heavy use of truck (common carrier and private) and rail by shippers in the industrial categories surveyed. Common carrier trucking is used most of all. Rail and private truck carriers are used relatively equally though the distribution of their use varies. Shippers in Northwestern Ontario rely most heavily on rail and private truck and registered the most frequent complaints about rail rates and service.

Interviews with persons in the business indicated that it was generally believed that shippers located in smaller communities where there was not a great deal of for-hire trucking available had the most difficult problem in negotiating a rail rate. They then turn to private trucking as their best

alternative if it is a reasonable method of transportation for their goods. This influences the location of industries and employment and biases it towards the larger centers.

There was also a further complaint that for-hire trucking did not always provide effective competition. In several markets the railways set prices for carload, pool car, railway intramodal, and piggy back services. For certain long distance traffic lengths this covers most of the alternative possibilities as relatively few common carriers operate over the road. Thus intermodal competition may not always be effective.

V - PUBLIC POLICY OPTIONS

In the earlier part of this report actual and potential problems concerning rail competition and levels of service have been discussed. In addition, in the research done for this project, various public policy initiatives intended to overcome these problems have been identified. The purpose of this section of the report is to describe these public policy options and their implications.

POSSIBLE OPTIONS

A number of policy options which may be undertaken by government and particularly the Ontario Government are described below:

1. Government Ownership of Railway Track and Rights-of-Way

This proposal has been made many times particularly in the United States. It is seen as being a method of overcoming some of the disadvantages that railways suffer from when compared to other modes. These disadvantages are:

- each railway is required to pay the entire cost of providing its infrastructure. These costs cannot be shared with other modes or with other railway companies.
- these costs include full depreciation charges and any return on investment that may be required by lenders or shareholders. In contrast, users of roads and other facilities are not usually charged for invested capital.
- right-of-way operating and maintenance costs must be paid in every year regardless of whether the carrier has a good year or a bad year. In contrast, other modes of transport which pay user charges (fuel taxes, licences, landing fees, etc.) find that their infrastructure costs are reduced in periods of lower traffic.

Because of the need to spend large amounts on building and maintaining infrastructure, the railway business is by nature monopolistic. The ownership of the rights-of-way by government is seen as a way of potentially introducing competition into the railway industry as well as overcoming the problems discussed above. This would be particularly true if a "neutral" agency were to take over the actual operation of the right of way with various "railway" companies operating over the track.

The implications of this type of policy by government are very significant. The government would be involved in decision-making at a very fine level of detail on individual railway operational and investment decisions. In this way it may be possible to introduce greater consideration for overall social costs than with decision-making decentralized as it is now but the implications for slowing down of decision-making are quite large. Under the current system of railway company ownership of the right-of-way, trade-offs are made between investment in plant and increased operating costs. Under a government ownership scheme these two costs would be borne by different agencies leading to many conflict situations. The idea of introducing more competition is attractive but introduces problems of decision-making and overall system optimization.

The current healthy financial state of the major Canadian railways tends to remove the major stimulus to undertake drastic changes in policy orientation such as this one. These changes have been proposed mainly in the situation where many railways were in imminent danger of becoming bankrupt or actually had suffered financial collapse and initiatives such as this one were seen as methods of maintaining railway services. Since we do not face this situation in Canada, this probably is not a relevant policy option. To mitigate some of the relative disadvantages that railways suffer,

other government policy alternatives may be more appropriate such as tax or other financial assistance.

2. Rate Regulation

With the 1967 National Transportation Act, Canada moved definitely away from rate regulation of railways. The railways were given a considerable amount of commercial freedom to set prices. Canadian railways have used this freedom so that by now the majority of traffic moves at competitive or negotiated rates. Returning to a regime of regulated rates would be turning the clock back. The most serious implication is the potential impact on railway profitability, particularly if the regulatory process were to be slow and/or onerous. This has been the experience in Canada in the past and currently in the United States. In a period of high inflation this is particularly onerous to the railway companies.

The United States is currently showing a great deal of interest in de-regulation. In fact, at the present time, railway de-regulation bills have passed in both the House of Representatives and the Senate although the final form that this legislation will take is not known. In any case, however, it does appear that the United States will follow Canada's lead and introduce some form of de-regulation. It is seen as having major advantages for the railway industry and for the economy as a whole.

Although there have been some complaints made by shippers since the removal of rate regulation in Canada, overall shipper satisfaction with the present system appears to be relatively high. The major railways have prospered and, in contrast to the experience in the United States, have to a considerable extent achieved or maintained financial self-sufficiency.

This has enabled them to provide a relatively high level of service to their users. Thus it would not appear that a return to a strict regime of rate regulations would be welcomed at this time either in Ontario or in Canada.

3. Improved Rate Appeal Procedures

When this rate making freedom was put into place, an appeal procedure was established for those shippers who are considered "captive" to the railway mode. To establish that they are truly "captive" has been a problem for many shippers and this appeal procedure has only rarely been used. The appeal procedure is also expensive; the full costs of arguing a case before the CTC can come to a million dollars or more. A more effective and/or more efficient appeal procedure might protect those shippers dependent upon railway transportation more than the current system.

It should be realized, however, that this protection would basically involve the setting of lower rates for certain types and classes of commodities and the inevitable impact of this would be to reduce the profitability of the Canadian railways. This has long-term implications with respect to the viability of the railways.

Another possible implication of simply reducing the restrictions on appeals is an increase in the amount of litigation and other regulatory activities. While this may be seen as a job creation program for lawyers and consultants, it is probably not in the interest of society as a whole. Various arbitration procedures have been proposed which would reduce the time and money required to hear an appeal.

In discussing the fairness and equity of various types of railway rates, one important consideration should be kept in mind. Railway costs have

a high fixed component. This means that although marginal cost pricing can and should be used to attract marginal traffic, some shippers will have to pay rates high enough to cover the railways' fixed costs. Therefore, a certain amount of price discrimination between users of rail service is implicit because of the structure of railway costs. A simplified example illustrates this problem.

Suppose a railway company has only one customer. The railways' fixed costs are \$45 and the variable cost of handling the traffic of this one customer is \$55. The railway charges this customer \$100, on the basis of its full costs.

Now suppose a railway salesman finds a second potential shipper who is now using another mode. The variable cost of handling his traffic would be \$55 and the railway quotes him a rate of \$60. The railway is now in a good situation in that it has total revenues of \$160 and total costs of \$155. The second shipper is happy or he would not have switched modes. The first shipper is paying the same rate as before and so is no worse off.

But now the first shipper feels he is being discriminated against. He is paying \$100 and the second shipper is paying only \$60. If we assume that his shipments are captive to the railway for some reason or other, he cannot use intermodal competition as a lever to get a better rate from the railway. The railway obviously cannot give him the same \$60 rate as the second shipper or else their total revenues would be only \$120 for a total cost of \$155. If both shippers were given the same rate, say \$77.50, the second shipper would not agree and might return to the other mode of transport he was

previously using. The largest price break the railway could give the first shipper is \$5, the contribution to overhead of the second shipper. In any case the first shipper is not really worse off than before, he just feels discriminated against. But the railway does not really have a choice, if it is to remain solvent. Therefore, because of the structure of railway costs, a certain amount of price discrimination is almost inevitable.

The shippers who are captive to the railways will be the ones who will be asked to contribute most toward fixed costs. It can be argued that this is justifiable in that, if the marginal shippers are not attracted, the captive shippers would still have to pay the fixed costs. Therefore, although there would appear to be unfair discrimination between shippers, on closer analysis it is not necessarily unfair. In fact, the captive shippers are probably better off the more marginal users the railways can attract as many of these will make some contribution to overheads, even if it is not their fully allocated share.

Equity considerations would seem to require that, if the present rate appeal procedure is not fair or is too expensive to be used by many applicants, a more effective appeal procedure should be established. Discussions have been held within the industry, and with the railways and the Federal Government concerning different forms this arbitration policy might take. These should be continued and, hopefully, brought to a successful conclusion.

4. Government Subsidy for Transportation to Inadequately Served Areas

Appeals to government to assist in improving transportation service through subsidy have been made many times. In addition, government subsidy has been seen as an answer to those areas of the country which are geographically

disadvantaged in terms of distance or physical barriers; for example, the Federal Government provides subsidies for certain materials being shipped out of the Maritime Provinces. In Ontario and British Columbia, Provincial Governments have financed the development of government owned railroads to serve areas not adequately served.

The rationale for transportation subsidies, although undoubtedly popular, is difficult to define. Why transportation should be subsidized and other geographical disadvantages (such as heating costs) should not is difficult to rationalize. The 1975 review of transport policies by Transport Canada concluded that a more meaningful categorization of transportation services that allows transportation subsidies to be paid is the difference between "mature" and "developing" systems. "Developing" systems could be subsidized until they are mature enough to support themselves. Even in this case, however, there is a difficulty that once industries grow up dependent upon the subsidies it is difficult to terminate them.

There is a further implication of using transportation subsidies to assist economic development; transportation subsidies assist all users of transportation whether they require this assistance or not. Thus, in most cases, economists prefer a more targetted type of subsidy which would provide funds to the specific industries for which help is desired.

Transportation subsidies will probably continue to be used to overcome lack of service or poor levels of service. However, because of the limitations of such policies pointed out above, in general it would be desirable to limit the use of such mechanisms.

5. Provincial Branch Line Program

As technological changes have favoured other modes, many railway branch lines have become uneconomic. The railways have usually applied to abandon these lines. Under the National Transportation Act, the Canadian Transport Commission has to approve such abandonments. First the CTC has to find that the operation of the line is actually uneconomic and then, if it decides that it is socially desirable to retain the line, a Federal Government subsidy is provided. However, this subsidy has rarely been applied in Ontario. Most railway lines proposed for abandonment have been found to be uneconomic and the abandonment has been approved. The branch line subsidy legislation has been used mostly as a mechanism for protecting the grain collection system in Western Canada.

The Government of Ontario, in the face of branch line abandonment proposals, in several cases has had to decide whether it should oppose these applications before the CTC or not. As the provider of infrastructure for other modes of transport, the Government has a very direct interest in such proposals. However, the decision-making body is a Federal agency and Ontario can only present arguments in front of the CTC.

In addition to appearing before the CTC, Ontario could itself set up a branch line subsidy program similar to some of the projects developed in several states. The Government could reimburse the railways for losses on the condition that the railways would maintain the line and provide certain levels of service.

This approach would require substantial funds from the Ontario Government. It also would involve the Government in detailed decision-making as to

the economic need and desirability for maintaining service on individual lines. In our opinion this is probably not a desirable direction for the Ontario Government to take at this time.

6. Provincial Position on Branch Lines

If a Provincial program to maintain service on branch lines were not developed, a consistent Ontario Government approach to branch line abandonment proposals could be developed. This could be done either independently so that Ontario could appear as an intervenor in CTC hearings or could be done in cooperation with Federal Government agencies and the railways. There are some precedents for the latter approach. Ontario and the Federal Government have undertaken some joint studies, particularly in passenger transportation in Southern Ontario. Also recently the Ministry of Transportation and Communications has been the catalyst for a study of the entire branch line network of both major railways in the Bruce Region.

It would therefore appear that instead of approaching each branch line abandonment in an ad hoc basis, a consistent analysis framework and policy position could be developed. We would recommend this development.

7. Land Banking of Railway Rights-of-Way

As described previously, railway applications to abandon uneconomic branches have usually been granted in Ontario. However, there are two considerations. In the future, as fuel becomes more expensive, the competitive balance might swing back towards the railways and additional service may be required. Also, these rights-of-way have been built up at great expense and they could potentially be used for other purposes such as transportation corridors, energy lines (electrical transmission lines, oil, and gas pipelines, etc.), recreational routes (hiking, snowmobiles, horse trails), or for other purposes.

In both cases, it is very important to maintain the integrity of the right-of-way for future contingencies.

In many cases it may be beneficial for some level of government to acquire these rights-of-way rather than allow them to be dispersed. In most cases the cost of this program should be relatively low and such a program therefore publically acceptable. However, the government would eventually have to decide which rights-of-way should be maintained in perpetuity and which can safely be disposed of. This again leads to more government involvement in detailed decision-making.

This proposal has a considerable amount of appeal as it maintains options without large investments of public funds. It also meshes fairly well with other Provincial Government responsibilities with respect to land use controls, economic development, etc.

8. Short Line Railroads

In the United States, the proposed abandonment of many branch lines by major railroads has been responded to by the setting up of local or short-line railway companies to operate branches. It is expected that such a smaller railroad company would have lower overhead costs and therefore would be more successful in operating a short line than the parent company could be. The results of these experiments have been somewhat mixed with some successful examples and several unsuccessful examples.

The relative lack of success of these initiatives tends to make this approach less desirable at this time. Until the viability of the short line approach can be demonstrated in the Canadian context, this would not appear to be an attractive policy option.

9. Government Provision of Risk Capital

The railway industry, with a relatively low level of profitability, sometimes finds it difficult to raise new capital for investment. A potential role of government would be to provide this new capital in specific circumstances. The circumstances could be investment in improvements to railways with an expected high level of productivity or in a new line to a new resource industry or other significant development.

In many cases, however, the railways are part of larger conglomerates and can usually find the financing for productivity improvement investments either from internally generated funds or from the investment community. Also, in the case of resource development, several new lines have been financed through government intervention. For example, rail lines in northern British Columbia are being developed by the Federal and Provincial Governments to facilitate the development of coal resources. The Great Slave Railway to the Northwest Territories was financed by the Federal Government, after receiving some guarantees of usage from private industry. There are several other examples of government financing of developmental lines. In some cases, similar financing has been provided by private industry. For example, the Quebec, Northshore and Labrador Railway was financed by the iron-ore companies developing the Labrador fields. Similarly, the Cartier Railway was developed by the company developing iron fields in that area.

Government investment in railways of this type should be seen as part of the larger resource development effort. A general policy of this type of government intervention in Canada would thus seem to be unnecessary. The present policy of deciding on a case by case basis might therefore be more appropriate.

10. Passenger Service Pricing

One of the major anomalies detected in our examination of passenger services policies was the relative pricing levels of the bus and rail modes. The bus carriers claim that they cannot raise rates because of the low level of rail fares. These rail fares are heavily subsidized and do not represent the true costs of doing business.

VIA's response to this has been that the bus industry already receives subsidies in the provision of infrastructure by Provincial and Municipal Governments. Even if user charges do approach current expenditures on roads and maintenance, they do not include any allowance for depreciation or return on invested capital. However, as is shown in the first chapter of this report, in the last detailed analysis of road transport subsidies, the bus mode was judged to pay virtually all of its share of the costs of providing road infrastructure and all of its internal costs.

Thus it would appear that bus carriers do have a legitimate grievance. A policy development that might be required is the pricing of rail services at a higher level than at present to allow bus carriers to achieve viability. This policy would have to be set at the Federal level but a Provincial initiative or policy intervention would presumably have a considerable impact as much of this competition between modes takes place in the Southern Ontario-Quebec markets.

11. Promotion of Intra-Rail Competition

In the previous chapters of this report it has been pointed out that railways have been given an exemption to Federal anti-combines legislation.

Canadian railways can and do participate in joint rate making and other consultative activities which would not be acceptable in other industries. Many shippers have the impressions that there is little price competition between the major railways in Canada, although there appears to be more service competition. The rationale for not including railways within the jurisdiction of the Combines Investigation Act is to prevent too much competition from occurring between the railways and thus not permitting them to recover their fixed and overhead costs.

Some shippers feel that greater competition between the railways would reduce rates on certain commodities, especially those which are "captive" to the rails. Increased competition possibly could be encouraged by applying the combines legislation to railways; alternatively it could be encouraged by lesser changes to the system such as extending the "inter-switching" distance limits so that each railway can reach a greater number of potential shippers or allowing the tariff on goods carried over U.S. lines to be waived under certain circumstances. The first proposal would represent a drastic change and may or may not be approved in the current environment.

The more minor changes noted above could be done much more simply. Increasing the inter-switching distance limit, in addition to encouraging more rate competition between the railways, could also give shippers more leverage in negotiating for an adequate supply of the required types of cars and other improvements in service. Increased use of this section of the Railway Act probably would also require an updating of the fees charged for inter-switching by the railways to one another. These have not been increased significantly over the last 50 years and inevitably do not reflect their current costs. The

EVALUATION OF POLICY OPTIONS

POLICY OPTION	OBJECTIVE	ADVANTAGES	DISADVANTAGES
1. Government Ownership of Railway Track and Rights-of-Way	- to assist railways in remaining economically solvent	- potentially introduces more competition to railway services - allows broader based decision-making	- involves government in many detailed decisions - negates trade-offs between investment and operational costs
2. Rate Regulation	- to ensure fairness to all rail users	- independent assessment of rates	- potential growth of litigation - probable reduction of railway profitability
3. Improved Rate Appeal Procedures	- to enable captive shippers to appeal effectively railway rate proposals	- independent assessment of rates when shipper is captive	- reduction in railway profitability
4. Government Subsidy for Transportation to Inadequately Served Areas	- to ensure the provision of good transportation services to all areas	- equity between various areas	- high costs - assistance to all users whether needed or not
5. Provincial Branch Line Program	- to maintain rail service in cases of social or economic desirability	- broader decision-making	- high cost - government involvement in a new area
6. Provincial Position on Branch Lines	- to present the Provincial position in CTC abandonment hearings	- present social and economic implications of abandonments	- possibly ineffective
7. Land Banking of Railway Rights-of-Way	- to maintain integrity of rail rights-of-way	- possible multiple uses of rights-of-way - compatibility with other Provincial policies	- in most cases eventually decisions have to be made on retention
8. Short Line Railways	- to maintain branch line services	- maintain service, but with private investment and operation	- concept not proved
9. Government Provision of Risk Capital	- to ensure that railways have funds for desirable investments	- relatively low risks	- Canadian railways can already obtain most capital requirements themselves
10. Passenger Service Pricing	- to maintain financial viability of bus carriers	- no direct government intervention	- increased rail fares for consumers
11. Promotion of Intra-Rail Competition	- to encourage more competition between railways	- improves services and rates to some shippers without direct government intervention	- may impact on financial viability of railways

determination of the number of shippers who might be affected by such a change would require a detailed analysis of the location of shippers in those communities where more than one railway is available.

Another possible alternative to increase intramodal competition is to waive the duty on goods carried over U.S. railways between two points in Canada. This could be done, perhaps on application to the CTC, when it is determined to be in the public interest. At the present time the CTC has no such discretion; it probably would be desirable to give it this discretion.

We recommend that more intramodal competition in the rail industry be encouraged through such measures as increasing the inter-switching distance limit and allowing the waiving of duty on shipments carried through the U.S. but that drastic changes to the Railway Act such as putting railways under the jurisdiction of combines legislation not be made without considerably more study.

EVALUATION

Exhibit 14 summarizes these policy options and their relative advantages and disadvantages. In our opinion, several of these potential policy options represent more drastic cures than the problems they are intended to overcome deserve. The options which are in this category are:

1. Government Ownership of Railway Track and Rights-of-Way.
2. Rate Regulation.
5. Provincial Branch Line Program.
8. Short Line Railways.
9. Government Provision of Risk Capital.

We would recommend that these options not be considered in more detail because of the detailed involvement of government which would be required and the limited benefits likely to be achieved.

Policy Option 4, Government Subsidy for Transportation to Inadequately Served Areas, has been used by several governments in Canada and undoubtedly will be used again to solve particular problems. We believe that a general policy of this nature would not be wise and that transportation subsidies should only reluctantly be granted. Subsidies to specific industries or specific areas on a more selective basis can usually be done more economically.

Of the various policy options that have been put forward here, we believe five deserve more consideration. These are:

- the need for an improved rate appeal procedure;
- the development of a provincial policy on the abandonment of branch rail lines;
- land banking of railway rights-of-way;
- equity of pricing between the rail and bus modes;
- promotion of intra-rail competition.

The improved rate appeal procedures would probably involve legislation at the Federal level, but the Province could make recommendations to this end and could influence the ultimate decision if it is decided that this would be an advantageous proposition. Encouragement of more intramodal competition would also require Federal action. Similarly the Federal Government is primarily responsible for branch line subsidies but the development of a Provincial policy would have considerable impact. Land banking of railway rights-of-way is in the Provincial sphere and the Province could go ahead

with this initiative, probably in consultation with the Federal Government and the railways. The question of equity of rail and bus fares requires more discussion at both the Provincial and Federal levels.

The real question to be answered is whether the Provincial Government should take a more active role in formulating railway policy and in representing the users of rail transportation in Ontario. Constitutionally this area has been in the Federal domain and Ontario traditionally has not become involved in the political and regulatory process. By way of comparison, several of the Western Provinces have taken a very active role in representing the position of the users of transportation services in their Provinces. They have made clear their position to the Federal Government, to the Canadian Transport Commission and to the general public in many important policy areas. Many shippers in Ontario feel that the Ontario Government should similarly take a forward position with respect to railway questions. The Ministry of Transportation and Communications has recently announced that a special section dealing with railway matters would be set up. The policy orientation of this group remains to be determined.

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LITERATURE REVIEW

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I - TRANSPORT SUBSIDIES

OVERVIEW

Federal, provincial and municipal governments all contribute toward the financing of transport services and infrastructure. The federal role includes responsibility for construction of airports, air navigation facilities and major ports, and the payment of direct subsidies to rail, road, water and air carriers. Provincial and municipal involvement extends mainly to the provision of highways and urban roads, urban transit, local airports, and intra-provincial ferry services.

Exhibit 1 presents an intermodal comparison of total transportation costs and deficits. Only those costs and revenues attributable to the users of each mode were included (a user being defined as one who uses the transport infrastructure for purposes of transportation). However, the costs do include a return on invested capital. The deficits as a percentage of total costs for air, marine, road and rail in 1973 were 16, 22, 6 and 26 percent respectively.

Exhibit 2 is a second intermodal comparison which is restricted to infrastructure costs and revenues. Rail is not included in this comparison because total rail revenues cannot easily be separated into infrastructure and vehicle revenues. The amount by which costs exceed revenues represents the level of indirect government subsidy for each mode. Exhibit 2 shows that user-derived revenues, as a percentage of infrastructure costs, have been increasing for the air mode while decreasing for the road and marine modes. Nevertheless, road cost recovery is still the highest of the three modes (59¢ of every dollar spent in 1975).

EXHIBIT 1

TOTAL TRANSPORTATION COST AND DEFICIT¹

CANADA - 1973

(In Millions of Dollars)

Mode	Infrastructure ² Cost (\$M)	Vehicle Cost (\$M)	Total Modal Cost (\$M)	Modal Costs As a Percentage of Total Transport Costs (Percent)	Deficit for Each Mode (\$M)	Deficit as a Percentage of Total Costs for Each Mode (Percent)
Air	354	1,163	1,516	6	243 ³	16
Marine	576	1,892	2,469	9	534 ⁴	22
Road	3,191	17,162	20,353	76	1,165 ⁵	6
Rail	661	1,771	2,548 ⁶	9	671	26
Total ⁶	4,813	22,073	26,886	100	2,614	10

1. Total may not agree due to rounding.

2. At a 6 percent rate of cost of capital; in 1973 prices.

3. Includes \$2.1 million in direct subsidies paid to regional air carriers.

4. Includes \$67.7 million in direct subsidies paid to Canadian for-hire water carriers.

5. Includes \$14.5 million in direct subsidies paid under the Atlantic Region Freight Assistance Act.

6. This figure in addition to rail infrastructure and vehicle costs also includes \$115.2 million of corporate taxes and regulating costs for 1973, for rail.

Source: Transport Canada, An Interim Report on Freight Transportation in Canada, June, 1975. This Table is an update of Table 6 in Z. Haritos' "Transport Costs and Revenues in Canada", Journal of Transport Economics and Policy, Volume IX, No. 1, January, 1975.

EXHIBIT 2ANNUAL TRANSPORT INFRASTRUCTURE COSTS AND REVENUES*

(millions of 1975 constant dollars)

	1968	1973	1975
<u>AIR</u>			
Annual Costs	340	436	516
Annual Revenues	95	137	192
Annual Indirect Subsidy	245	299	324
Percentage Cost Recovery	29%	11%	37%
<u>MARINE</u>			
Annual Costs	637	714	721
Annual Revenues	135	132	122
Annual Indirect Subsidy	502	582	599
Percentage Cost Recovery	21%	19%	17%
<u>ROAD</u>			
Annual Costs	3330	4310	4796
Annual Revenues	2391	2696	2805
Annual Indirect Subsidy	939	1614	1991
Percentage Cost Recovery	72%	63%	59%

Source: Transport Canada, Transportation Subsidies, June, 1980.

*These subsidy data are in the process of being updated further by Transport Canada and additional information will soon be available.

EXHIBIT 3

DIRECT TRANSPORTATION SUBSIDIES AND PAYMENTS BY THE FEDERAL GOVERNMENT

	<u>1974/75</u>	<u>1975/76</u>	<u>1976/77</u>	<u>1977/78</u>	<u>1978/79</u>
	(\$ millions current)				
<u>Rail Payments</u>					
Unprotected branch lines (CTC)	1.0	0.2	0.6	6.5	11.1
Guaranteed branch lines (CTC)	81.6	108.3	103.7	67.0	98.8
Rail passenger					
- CTC	149.8	200.7	161.4	205.7	212.8
- TC 1	--	--	--	5.3	72.5
At and East subsidy (CTC)	10.4	17.0	15.2	22.8	44.7
Maritime Freight Rates Act (CTC)	15.1	16.0	17.1	15.9	15.4
Railway Grade Crossing Fund (CTC)	8.8	28.6	27.2	15.8	22.5
TC Grants & contributions	118.3	13.0	67.9	57.0	70.1
TOTAL RAIL	<u>385.0</u>	<u>383.8</u>	<u>393.1</u>	<u>396.0</u>	<u>547.9</u>
<u>Road Payments</u>					
ARFAA (CTC)	21.5	23.7	27.1	29.9	41.3
TC grants & contributions	22.9	31.8	42.2	60.3	94.1
TOTAL ROAD	<u>44.4</u>	<u>55.5</u>	<u>69.3</u>	<u>90.2</u>	<u>135.4</u>
<u>Water Payments</u>					
Coastal and ferry services					
- CTC	11.2	16.0	15.6	--	--
- TC	--	--	--	22.7	20.9
CN Marine Inc. 1	115.1	111.5	94.2	128.0	117.7
Pilotage Authorities	5.6	3.6	3.1	1.8	0.8
NHB/Bridges	1.1	2.1	3.8	3.7 2	4.6
Saint Lawrence Seaway	33.4	41.6	32.4	20.9	1.4
Canarctic Shipping	--	--	--	--	2.2
TOTAL WATER	<u>166.4</u>	<u>174.8</u>	<u>149.1</u>	<u>177.1</u>	<u>147.6</u>
<u>Air Payments</u>					
Regional Air Carriers (CTC)	1.9	2.4	2.0	2.0	2.0
TC grants & contributions	11.2	8.3	9.1	10.7	13.6
TOTAL AIR	<u>13.1</u>	<u>10.7</u>	<u>11.1</u>	<u>12.7</u>	<u>15.6</u>
<u>Urban grants & contributions</u>	--	--	--	<u>10.3</u>	<u>25.5</u>
<u>Administration grants & contributions</u>	<u>8.3</u>	<u>8.8</u>	<u>28.6</u>	<u>9.2</u>	<u>6.1</u>
TOTAL SUBSIDIES & PAYMENTS	<u>617.2</u>	<u>633.6</u>	<u>651.2</u>	<u>695.5</u>	<u>878.1</u>

1. Includes capital expenditures.

2. Excludes \$4.3M to write off a debt (including interest) regarding the Burrard Inlet bridge-tunnel study.

Source: Transport Canada, Transportation Subsidies, June, 1980

Exhibit 3, opposite, shows direct subsidies and payments by the federal government to all four modes for the fiscal years 1974/75 to 1978/79. Ontario government direct subsidies to air, rail and marine modes through the Ontario Northland Transportation Commission are shown in Exhibit 4, overleaf. Each type of subsidy and payment is discussed by mode in the following sections.

PASSENGER TRANSPORT - RAIL

The National Transportation Act of 1967 made provision for the Federal Government to pay subsidies to the railways for losses incurred in operating passenger services. Payment of these subsidies began in 1970 and is still continuing, though the subsidy program was replaced by the operating contracts program with VIA Rail beginning in 1978. The remaining subsidy payments are for claims in years prior to 1978.

Prior to the establishment of VIA Rail, the Canadian Transport Commission calculated the "actual losses" for each rail service upon application by the carrier for discontinuance. If the CTC judged the service to be uneconomic it could either order the service suspended or order it continued with up to 80% of the certified losses federally subsidized. By the early 1970's all remaining passenger services were defined as uneconomic.

VIA Rail is a crown corporation established in 1976/77 in an attempt to reduce the rail passenger subsidy by rationalizing the rail service network and improving the efficiency and cost effectiveness of rail passenger services. Contract payments to VIA Rail, which began April 1, 1978, are based on contracts for services between VIA and the Minister of Transport. VIA reimburses the railways for the rail services they provide to it under compensatory service contracts.

EXHIBIT 4

PROVINCIAL SUBSIDIES TO ONTARIO NORTHLAND
TRANSPORTATION COMMISSION FOR TRANSPORTATION SERVICES

	1975	1976	1977	1978
	(\$ millions current dollars)			
Cochrane-Moosonee Branch Line	2.8	2.1	2.6	3.5
Main Line Passenger Train	2.1	2.2	2.2	3.3
Northlander	-	-	3.8	3.6
NorOntair	1.1	1.5	1.4	0.8
Moosonee Ferry	-	-	0.06	0.05

Source: Ontario Northland Transportation Commission, Annual Reports 1975, 1976, 1977, 1978.

Exhibit 5 shows subsidy payments to Canadian National and Canadian Pacific for rail passenger services in calendar years 1970-74. Exhibit 6 shows totally subsidy payments to both railways beginning in fiscal year 1974/75 to 1978/79. In both tables the figures refer to payments actually made on those years and do not refer to actual subsidies in respect of rail passenger losses for those years.

Exhibit 7 shows the regional distribution of rail passenger subsidy payments in 1974. Exhibit 8 shows financial and related operating data from 1972-1977 for the Windsor-Quebec City corridor rail passenger system. Exhibits 9 and 10 give this data broken down by individual rail services in the corridor. The conclusions of the analysis from which Exhibits 8, 9 and 10 are taken were:*

- "1) there has been considerable excess capacity throughout the system which, together with the sharp decline in capacity utilization between 1972 and 1974, accounted in large measure for the decline in financial performance in these years;
- 2) throughout the 1974-77 period, the major difficulty has been one of large increases in unit costs: average costs per seat-mile have been increasing faster than average revenues per passenger-mile. A continuation of this trend would result in increasing losses even if the level of capacity utilization were to be improved;
- 3) a number of factors have been identified to explain the increases in unit costs. These included increases in service frequency, declining train sizes, major car renovation programs and increased cost claims for such items as superintendence and miscellaneous expenses."

The Ontario government provides direct subsidies for rail passenger services operated by the Ontario Northland Transportation Commission. Total

*Canadian Transport Commission, Economic and Financial Analysis of the Corridor Rail Passenger System, Report No. 40-79-03, October, 1979.

EXHIBIT 5NET SUBSIDIES TO RAIL PASSENGER SERVICES

1970 TO 1974
(Current Dollars)

	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>
<u>Canadian National</u>					
Net Subsidy (\$ millions)		47.3	75.7	90.5	108.1
Subsidy per Passenger Mile (¢)		3.0	5.1	8.9	8.5
<u>Canadian Pacific</u>					
Net Subsidy (\$ millions)	20.9	19.9	19.4	22.1	24.7
Subsidy per Passenger Mile (¢)	5.5	6.1	6.8	11.1	8.4
<u>TOTAL</u>					
Net Subsidy (\$ millions)	20.9	67.2	95.1	112.6	132.8

Source: Canadian Transport Commission, Pricing and Subsidy of Air and Rail Passenger Transport, CTC Report No. 00-76-03, March, 1976.

EXHIBIT 6DIRECT SUBSIDIES AND PAYMENTS TO
RAIL PASSENGER SERVICESFISCAL YEAR 1974/75 TO 1978/79

(\$ millions current)

	<u>1974/75</u>	<u>1975/76</u>	<u>1976/77</u>	<u>1977/78</u>	<u>1978/79</u>
Canadian Transport Commission ¹	149.8	200.7	161.4	205.7	212.8
Transport Canada ²	-	-	-	5.3	72.5
Total	149.8	200.7	161.4	211.0	285.3

¹ Payments by CTC are according to Sections 260 and 261 for losses incurred by CP and CN prior to April, 1978.

² Payments by Transport Canada are based on contracts with VIA Rail and include capital expenditures. 1977/78 payments are related to start-up costs.

Source: Transport Canada, Transportation Subsidies, June, 1980.

EXHIBIT 7RAIL PASSENGER SUBSIDY PAYMENTS: 1974

<u>Region</u>	<u>Canadian National</u>	<u>Canadian Pacific</u>	<u>Other Railways</u>	<u>Total</u>	<u>Percent of Total</u>
Newfoundland					
Maritimes	\$ 24,125,767	\$ 2,576,081	-	\$ 26,701,848	20.1
The Corridor	28,061,450	1,972,798	-	30,034,248	22.6
Mid-Canada	8,827,815	797,382	\$ 238,924	9,864,121	7.4
Western Canada	9,038,606	690,061	-	9,728,667	7.3
Transcontinental	37,917,361	18,677,746	-	56,595,107	42.6
Total	\$107,970,999	\$ 24,714,069	\$ 238,924	\$132,923,991	100.0

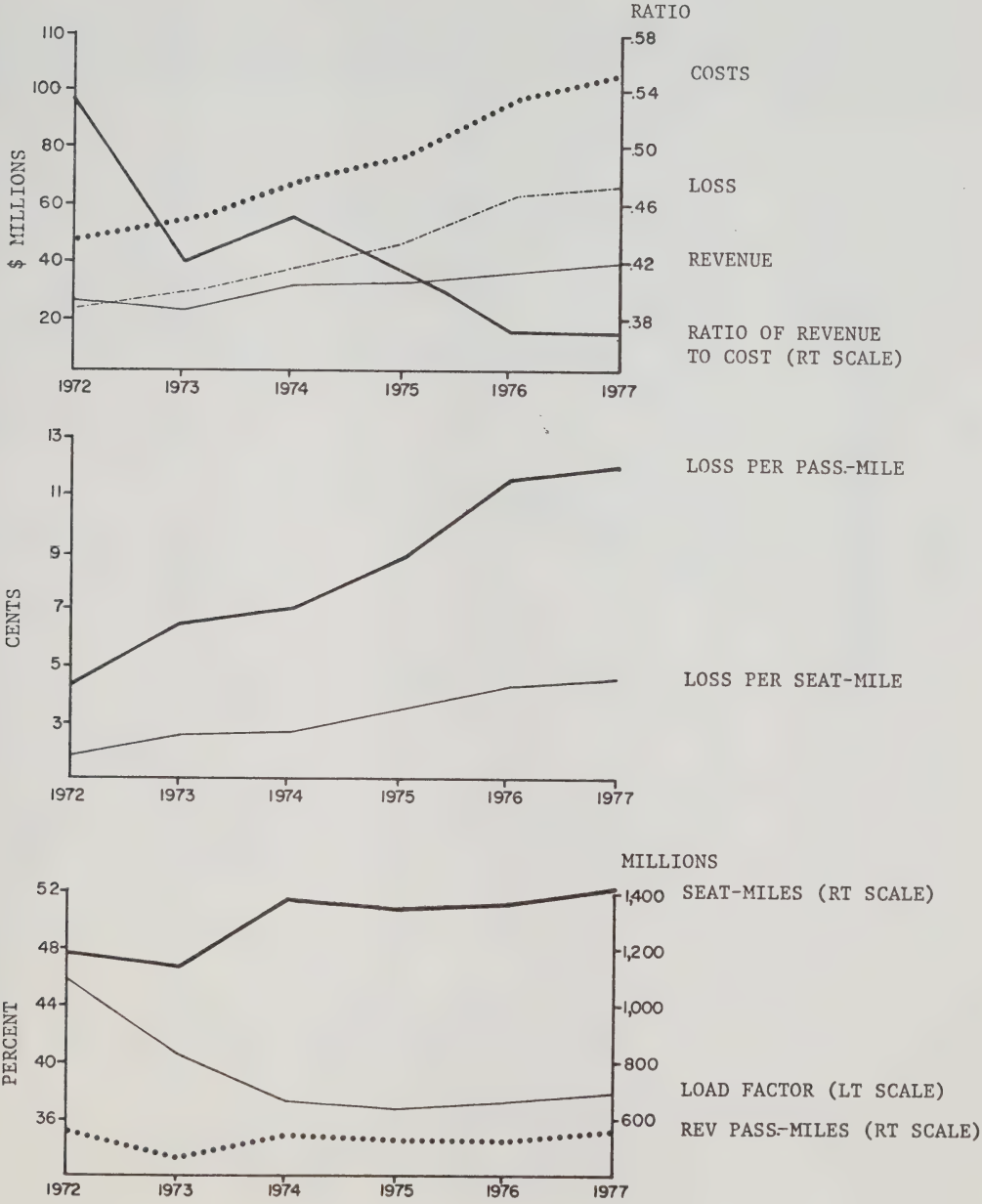
As the subsidy payments are calculated at 80% of the certified actual loss,
100% of the loss would be

--
\$166,154,989

Source: CTC, Pricing and Subsidy of Air and Rail Passenger Transport, Report No. 00-76-03, 1976

EXHIBIT 8

CORRIDOR RAIL PASSENGER SERVICES
FINANCIAL AND RELATED OPERATING DATA



Source: CTC, Economic and Financial Analysis of the Corridor Rail Passenger System, Report No. 40-79-03, 1979

EXHIBIT 9

CORRIDOR RAIL PASSENGER SERVICES
RELATIVE IMPORTANCE OF SPECIFIC SERVICES

	Passengers (Thousands)	1977					Percent of Total Loss
		Percent of Total Passengers	Passenger- Miles (Millions)	Percent of Total Pass.-Miles	Loss Per Pass.-Mile (cents)	Total Loss (\$Millions)	
Montreal-Toronto	905.2	26.6	249.1	45.0	8.2	20.4	30.6*
Toronto-Kingston	114.1	3.4	13.4	2.4	10.6	1.4	2.1*
Montreal-Quebec (CN)	112.5	3.3	17.3	3.1	24.5	4.3	6.4
Montreal-Ottawa	224.5	6.6	24.0	4.3	28.4	6.8	10.2
Ottawa-Brockville- Toronto	330.5	9.7	57.8	10.5	10.0	5.8	8.7*
Ottawa-Bellefeuille- (Toronto)	19.3	0.6	2.5	0.5	52.4	1.3	2.0
Toronto-Windsor	792.5	23.3	114.2	20.6	10.0	11.5	17.2*
Toronto-London-Sarnia	675.9	19.9	59.7	10.8	16.4	9.8	14.7
Toronto-Stratford	45.9	1.4	2.6	0.5	38.9	1.0	1.5
Toronto-Niagara Falls	131.2	3.9	7.7	1.4	29.2	2.2	3.4
Montreal-Quebec (CP)	48.4	1.4	5.1	0.9	41.3	2.1	3.1
System Total	3,400.0	100.0	553.6	100.0	12.0	66.7	100.0

*Indicates services with a loss that is less than proportional to its share of passenger-miles generated.

Source: CTC, Pricing and Subsidy of Air and Rail Passenger Transport, Report No. 00-76-03, 1976

EXHIBIT 10

CORRIDOR RAIL PASSENGER SERVICES
LOAD FACTOR BY SERVICE

	<u>1972</u>	<u>1973*</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>
Montreal-Toronto	55.6	51.6	51.1	46.0	50.5	50.2
Ottawa-Brockville-Toronto	46.0	41.2	39.8	45.0	32.3	36.5
Ottawa-Belleville-(Toronto)	34.9	31.6	28.8	30.2	31.1	32.2
Toronto-Kingston**	36.8	37.0	37.6	31.4	29.2	30.8
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
Sub-Total Average***	54.0	50.0	49.2	45.2	45.6	45.7
Montreal-Quebec (CN)	46.4	45.6	45.7	41.0	38.0	37.4
Montreal-Ottawa	47.5	37.3	34.0	23.5	34.5	36.2
Toronto-Windsor	40.8	35.6	31.5	37.8	35.6	36.8
Toronto-London-Sarnia	29.4	27.2	24.7	29.1	29.3	28.3
Toronto-Stratford**	26.0	22.0	24.3	21.1	18.9	18.5
Toronto-Niagara Falls**	26.1	19.3	19.2	17.5	17.9	19.2
Montreal-Quebec (CP)**	34.3	26.9	26.2	21.6	17.0	16.9
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
Corridor Average	45.8	40.6	38.7	38.3	38.6	39.0

RATIO OF REVENUE TO COST BY SERVICE

Montreal-Toronto	.64	.52	.57	.51	.48	.46
Ottawa-Brockville-Toronto	.34	.30	.38	.33	.38	.42
Ottawa-Belleville-(Toronto)	.23	.18	.20	.19	.13	.14
Toronto-Kingston**	.54	.46	.54	.47	.37	.38
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
Sub-Total Average***	.61	.48	.54	.48	.45	.44
Montreal-Quebec (CN)	.46	.37	.38	.30	.26	.24
Montreal-Ottawa	.41	.31	.30	.23	.21	.21
Toronto-Windsor	.57	.49	.48	.42	.38	.40
Toronto-London-Sarnia	.39	.30	.32	.34	.29	.30
Toronto-Stratford**	.28	.22	.25	.20	.18	.14
Toronto-Niagara Falls**	.34	.22	.26	.23	.19	.17
Montreal-Quebec (CP)**	.38	.25	.25	.22	.17	.17
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
Corridor Average	.53	.42	.45	.41	.37	.37

* Rail Strike occurred in summer of 1973.

** Service operated primarily with RDC equipment.

*** Montreal-Toronto and associated services.

Source: CTC, Pricing and Subsidy of Air and Rail Passenger Transport,
Report No. 00-76-03, 1976

EXHIBIT 11DIRECT SUBSIDIES TO AIR PASSENGER TRANSPORT

(\$ millions current)

	<u>1974/75</u>	<u>1975/76</u>	<u>1976/77</u>	<u>1977/78</u>	<u>1978/79</u>
Regional Air Carriers	1.9	2.4	2.0	2.0	2.0
Transport Canada Grants and Contributions	11.2	8.3	9.1	10.7	13.6
TOTAL	<u>13.1</u>	<u>10.7</u>	<u>11.1</u>	<u>12.7</u>	<u>15.6</u>

Source: Transportation Subsidies, Transport Canada, June, 1980.

subsidies for the Cochrane-Moosonee branch line, the main line passenger train, and the Northlander were \$10.4 million in 1978, though some portion of this amount should be allocated to freight hauled in mixed trains on the Cochrane-Moosonee line.

PASSENGER TRANSPORT - AIR

The Federal Government subsidizes air transportation both directly and indirectly. Indirect subsidies are by far the larger part of federal payments.

Direct subsidies are in two forms. Under a program introduced in October, 1966, regional air carriers are eligible for subsidies under certain circumstances, e.g. for services to a remote area, initial support to a new service, or development activity support. Annual subsidies under the program have been limited to \$2 million, which is currently divided between two carriers, Eastern Provincial Airways (EPA) and Quebecair.

Direct subsidies have also been made in the form of grants and contributions by Transport Canada for the operation of municipal airports and to assist in the establishment or improvement of local airports and feeder airports and related facilities. This program of capital assistance to local and feeder airports was terminated on April 1, 1979, and capital contributions to these airports are now provided through the regular capital program. Exhibit 11, opposite, shows the level of direct subsidy to air transport from 1974/75 to 1978/79, which has ranged from a low of \$11.1 million to a high of \$15.6 million.

EXHIBIT 12

NET SUBSIDIES TO THE AIR MODE

<u>Air</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>
Net Expenditures (1)	\$ 196,900,000	234,910,000	214,900,000	339,300,000
Passengers (2)	15,000,000	16,128,000	18,100,000	22,100,000
Passenger Miles (3)	9,193,000,000	9,059,572,000	10,661,300,000	12,945,800,000
Subsidy/Passenger (4)	\$ 13.80	\$ 14.56	\$ 11.87	\$ 15.35
Subsidy/Passenger Mile: (4)	2.14¢	2.59¢	2.01¢	2.62¢
(5)	2.20¢	2.59¢	1.92¢	2.32¢

Sources:

Public Accounts of Canada

Air Carrier Operations in Canada, Statistics Canada, catalog 51-002

Notes:

(1) Gross government expenditures on airport program less revenues (landing fees, concessions, etc)

(2) Domestic and International Passengers carried by Canadian airlines (level I-V) or foreign scheduled airlines.

(3) Passengers carried on non-scheduled services provided by foreign airlines are excluded
(3) Domestic passenger miles plus one-half of international passenger miles.

(4) Actual Values

(5) Constant dollars based on Consumer Price Index (1971= 1.00)

The Ontario government subsidizes the operation of NorOntair, a regional airline operated by the Ontario Northland Transportation Commission. Over the years 1975-1978 the subsidy has ranged from a high of \$1.5 million in 1976 to a low of \$0.8 million in 1978. In addition, the Ontario government has provided some of the aircraft and other capital assets used in the NorOntair services.

The Ontario government also has a policy of assisting airfield development at remote communities in Northern Ontario.

Indirect subsidies to air transport mainly occur through federal government provision of aviation infrastructure, including airports, meteorological services, and air traffic control operations. Exhibit 12, opposite, shows net indirect subsidies to air transport (gross aviation expenditures less revenues received from user charges or rental fees) for the years 1970 to 1973. These subsidies ranged from \$11.87 to \$15.35 per passenger (current dollars) and from 1.92¢ to 2.59¢ per passenger-mile (constant 1971 dollars). Exhibit 2 shows, in constant 1975 dollars, a comparison of annual costs and annual revenues for air transport infrastructure for the years 1968, 1973 and 1975. While the level of subsidy increased over these years from \$245 million to \$324 million, revenues increased faster proportionately, going from 28% of costs in 1968 to 37% in 1975.

PASSENGER TRANSPORT - ROAD

Passenger transport modes which use the road infrastructure are the bus and private automobile. The other major user is trucking for the movement of freight. Exhibit 2 shows that road infrastructure has the highest cost recovery (59% in 1975) compared with air and marine (37% and 17% respectively).

With respect to passenger transport, the indirect subsidy to the private auto in 1972 was about $\frac{1}{2}$ cent per passenger-mile, while the bus passenger was subsidized very little, if at all. There are no direct subsidies normally paid to operators of either mode, although recently the Federal Government has committed itself to assisting the bus industry in the Atlantic Provinces through capital grants, as part of a rail rationalization plan. Of the two categories of direct federal road payments shown in Exhibit 3, one relates to freight transport (ARFAA) and the other mainly comprises payments to road strengthening and improvement programs in the Atlantic and Prairie provinces.

PASSENGER TRANSPORT - MARINE

Marine passenger transport is subsidized directly through federal and provincial payments and indirectly through the provision of infrastructure.

It is difficult, however, to determine the level of subsidy which applies only to passenger transport since some direct payments and infrastructure are for both passenger and freight transport.

Federal payments through the Coastal and Ferry Service Subsidy (\$20.9 million) are direct subsidies to operators of coastal and ferry services in isolated coastal regions. These payments are made on the basis of formal contracts that are generally negotiated annually. The 1977/78 and 1978/79 payments included an \$8.5 million grant to the province of British Columbia to be used in providing coastal and ferry services.

*Based on Canadian Transport Commission calculations cited by Transport Canada in An Interim Report on Inter-City Passenger Movement in Canada, June, 1975.

Direct federal payments to CN Marine Inc. were \$117.7 million in 1978/79. Canadian National, through its wholly owned subsidiary CN Marine Inc., manages and operates certain east coast ferry and coastal shipping services on behalf of the federal government.

The Ontario Ministry of Transportation and Communications operates several ferry services in the province. Direct operating and infrastructure costs were approximately \$2 million in the year ending March, 1979. In addition, there is a small provincial subsidy of about \$50,000 to the Ontario Northland Transportation Commission for operation of the Moosonee ferry.

PASSENGER TRANSPORT - SUMMARY

Although the data on passenger transport subsidies presented here are not directly comparable since they are given for different years and geographic areas, it is still possible to conclude that a ranking by decreasing level of subsidy would place the modes in the following order: rail, air, private auto, bus. The range of subsidy from rail to bus is quite wide, even to the point of suggesting some extreme comparisons. For example, the loss per passenger-mile on the Montreal-Ottawa train service in 1977 was 28.4 cents. At a distance of about 110 miles between the two cities this means the total loss per through passenger averaged \$31.24. Since there is no subsidy for bus travel, it would have been cheaper for the Federal Government to give rail passengers free bus tickets (\$12.85 return in July, 1977) than to cover the loss on the rail service.

Such a comparison, when coupled with the complaint by bus operators that "predatory" rail pricing is forcing them to lose money on competing runs, raises the issue of whether it would not be more cost-effective to raise the rail fares substantially, thereby reflecting somewhat more realistically the

cost of providing rail service, reducing the rail passenger subsidy required from the taxpayer, and allowing the bus operators to remain profitable while charging competitive fares on most routes. This issue is addressed again in the final section of this report.

FREIGHT TRANSPORT - RAIL

Direct federal subsidies and payments applicable to rail freight transport were \$262.2 million in 1978/79.

Branch line subsidies accounted for \$109.9 million of the total subsidies and payments. The National Transportation Act of 1967 shifted the financial burden of operating uneconomic branch lines from the railways to the Federal Government. Upon application for abandonment of a line by a railway, the CTC will hold public hearings and then either allow abandonment or provide for continued operation of the line by recommending government reimbursement of the railway company's actual losses.

The At and East subsidy (\$44.7 million in 1978/79) serves to maintain the volume of export grain available to Canada's Atlantic ports by subsidizing rail rates to these ports to the point of being competitive with shipment through the Seaway during its season and shipment to U.S. Atlantic ports during the winter. This subsidy was made permanent by Section 272 of the Railway Act as amended by the National Transportation Act.

The Maritime Freight Rates Act provides for a 15% subsidy on freight rates for selected commodities shipped within the Maritime provinces and the Gaspé and a 30% subsidy on all westbound shipments originating in this area. In 1974 provision was made for an additional subsidy of 20% on westbound shipments of selected commodities. The subsidies under this act totalled \$15.4 million in 1978/79.

The Railway Grade Crossing Fund holds appropriations for construction work at railway crossings to increase public protection, safety, and convenience. Payments to the fund were \$22.5 million in 1978/79.

As mentioned earlier, some portion of the \$3.3 million Ontario government subsidy to the Cochrane-Moosonee branch line should be allocated to freight transport, but the available data do not given the appropriate allocation.

FREIGHT TRANSPORTATION - ROAD

The only direct subsidy to freight transport by road occurs under the Atlantic Region Freight Assistance Act, which extends the subsidy provisions of the Maritime Freight Rates Act to trucking. The amount of subsidy was \$41.3 million in 1978/79.

There appears to be disagreement between the two analyses of the extent to which truck transport of freight receives an indirect subsidy through the provision of infrastructure. In 1967, the Ontario Select Committee on Taxation reached the conclusion that "... the present revenue structure in Ontario tends to charge passenger vehicle and light truck owners less than the road costs they occasion, while the owners of heavy trucks and buses are more than meeting their cost responsibility".

A 1973 study by Haritos, using 1968 data, concluded that while buses paid more than their economically efficient share of road costs, passengers cars and trucks paid less than their efficient share. There are several differences in the assumptions underlying the two analyses which account for the different conclusion regarding trucks. One key assumption by the Select

Committee is that road users should only have to cover 65 to 70 percent of road costs, owing to the fact that non-users receive benefits from the road system. Haritos's analysis allocates total road costs to users only.

FREIGHT TRANSPORT - MARINE

A portion of the Coastal and Ferry Service Subsidy (\$20.9 million) and the CN Marine Inc. subsidy (\$117.7 million) described previously should be allocated to freight transport. There is, however, no established method of making this allocation.

The annual operating deficit of the St. Lawrence Seaway was covered by federal payments until April 1, 1978. A refinancing arrangement approved in 1977/78 and a toll increase removed the need for these payments (the \$1.4 million paid in 1978/79 was for maintenance and operation of the lock at Sault Ste. Marie, a responsibility transferred to Parks Canada on April 1, 1979). Loans and advances to the Seaway Authority were forgiven as part of the refinancing but are not reflected in the direct payments and subsidies shown in Exhibit 3.

The Federal Government covers the operating deficit of the M.V. Arctic, an ice-breaking bulk carrier operated by Canarctic Shipping. This deficit was \$2.2 million in 1978/79 and is expected to range between \$4-\$7 million over the next few years.

II - INTRA-RAILWAY COMPETITION

Three sources which examine the nature of competition between the railways in freight movement have been reviewed. A 1977 monograph by Heaver and Nelson and some recent analysis by the Canadian Transport Commission examine this issue in depth. Another CTC report (McLaughlin, 1978) provides some insight into the views of bulk freight shippers on competition between the railways. The major findings and conclusions of all three sources are reviewed here.

HEAVER AND NELSON (1977)

In Chapter 7 of their monograph, the authors conclude that "... in spite of the fewness of the railways in the market and their tendency to consult and agree on rates, much competition between railways actually takes place, especially by way of service rivalry. However, several dimensions of competition are often involved, including rate competition. Such intramodal competition extends over the border with American railroads, adding competitive alternatives for shippers in a number of instances."

In a paper published in 1979 they state: "Important competition exists between carriers within a mode of transport. Although intramodal rate competition is exceptional in Canadian railway markets, intramodal service competition is very important. The complaints voiced by shippers dependent on only one railway are evidence, in a reciprocal sense, of the merits of two or more railways."

Heaver and Nelson cite four constraints on competition between the railways, two legislative and two regulatory. Section 279 of the Railway Act gives the railways in Canada the right to agree upon and charge common rates, which allows for and, indeed, even suggests the likelihood of reduced rate competition. Section 382 of the Act, which subjects goods carried by rail between points in Canada over lines in the U.S.A. under combination rates, as opposed to joint rates, to a 30% customs tariff, reduces the probability of American lines competing with Canadian lines. The regulatory constraints on competition are interswitching limits and rates and the setting of through routes and joint rates.

Interswitching

Heaver and Nelson define interswitching as "... the movement of car-load freight by the terminal carrier between the point of loading or unloading on such terminal carrier's tracks and the point of interchange with the line-haul carrier". Shipments which are carried from loading point to unloading point by the line-haul carrier normally are charged only the line-haul rate, as the delivery or collection of the car is incidental to the line-haul. Where the line-haul carrier cannot perform this complete service, however, a local (line-haul) rate or switching rate must be added to the line-haul rate for interswitching services by the terminal carrier(s).

During the time that the railway system in Canada was evolving at the turn of the century, shippers sought to have a large number of interchange points and reasonable interswitching rates so that they would have access to more than one railway. The Board of Railway Commissioners dealt with this issue in 1907 and 1918, and in the latter instance issued an order setting interswitching rates and regulations which applied within four miles of an

interchange point. The interswitching regulations today*are essentially unchanged from the original, the one major change being a 50 percent rate increase granted in 1951.

There are two major results of this lack of change in interswitching rates and limits. First, railways are compelled to provide interswitching services at rates which are unremunerative. Heaver and Nelson question whether this is in the interest of an efficient and profitable railway system. The low rates cause a maldistribution between railways of the loss incurred on interswitching and lead to inefficient car handling routes in urban areas by encouraging railways to move a car over a circuitous route if a more direct route would require delivery beyond interswitching limits, which would mean revenue-sharing with the terminal carrier on a line-haul rather than an interswitching basis.

The second major result arises out of the four mile limit which has remained unchanged since 1908. This means that a shipper has access to the carriers at the interchange point as long as his plant is located within four miles of the interchange point as measured along the tracks of the carrier which serves his plant. If he is beyond this point, the interswitching regulations do not apply and he must deal with the carrier on a line-haul basis. Heaver and Nelson conclude that: "Since the growth of urban communities has substantially exceeded the increase in the number of interchange points and four miles is a limited distance in the context of today's large urban areas, the percentage of shippers enjoying competitive rail service at the same rates has diminished over recent years"; and suggest that: "In view of the dominance of the service rather than rate competition among railways, and in view of the radical change

*Given in General Order T-12 issued by the Board of Transport Commissioners.

in transport markets and in urban communities, it may not be appropriate to have the same interswitching limits today as those in effect seventy years ago".

Overall, the authors conclude that the current interswitching rates and regulations are "no longer consistent with the efficient working of a competitive rail system".

Through Routes and Joint Rates

Section 284(1) of the Railway Act requires that "Where traffic is to pass over any continuous route in Canada operated by two or more companies, several companies shall agree upon a joint tariff ...". If the railways fail to agree on a joint tariff over a route which the CTC considers a reasonable and practicable route, the CTC "may require such companies, within a prescribed time, to agree upon and file in like manner, a joint tariff for such continuous route, satisfactory to the Commission, or may, by order, determine the route, fix the toll or tolls and apportion the same among the companies ..." (Railway Act, Section 285(1)).

The selection of routes over which goods travel affects the rates paid by shippers; hence the ability to influence routes is an important concern of shippers. The Turgeon Commission dealt with this matter in 1951. The position of shippers **before** the Commission was that "the railways should be compelled to quote joint interline rates over the most direct routes", whereas the railways argued that "to quote joint interline rates over the most direct routes might mean compelling a railway to short-haul itself, and would also result in the breakdown of some existing single-line rates". The Commission concluded that "The Board (of Transport Commissioners) has held that if one carrier has a route over its own rails which is reasonable and practicable, joint tariffs are not required".

The practical workings of the position on through routes and the interswitching limits can be illustrated through an example cited in Heaver and Nelson:

"... from Vancouver CP has the short-line mileage to Calgary, but the circuitous route, via Calgary, to Edmonton. CN has the short-line mileage to Edmonton, but the circuitous route, via Edmonton, to Calgary. A Vancouver shipper on a local CN point may only have available a route via CN, through Edmonton to Calgary. Depending on the competitive forces limiting the rates, it would be possible for a shipper located on the CN line to have a higher rate than a shipper located within interswitching limits and, therefore, able to use the CP. This could exist even if the shipper at the noncompetitive CN point was closer to Calgary, as measured by a short-line route through a CP interchange beyond four miles, than a shipper on the CN within interswitching limits of the CP. For example, a shipper at a CN local point east of Vancouver might pay more than a shipper located in Vancouver with access to the CP through interswitching. The Board has heard such cases and determined that such pricing, while discriminatory, is not unjust. Whether such pricing would be found to be in the public interest, since the passage of the National Transportation Act (1967) is not clear."

A 1976 study by the Ministry of Transportation and Communications reported that Northern Ontario industries suffer because through routes are not available to U.S. markets via the gateways of Fort Frances and Sault Ste. Marie. Instead, freight going to northern U.S. markets travels a circuitous route via Toronto, a long route which adds to freight costs.

Price Competition Among Railways

Heaver and Nelson outline the railways' rate setting practices:

"In Canada the practice, both before and since 1967, has been for the rail carriers to check with each other on matters of rate determination, to agree on rates quoted to shippers, and to sign joint letters of response to requests from shippers for rate adjustments. These long-standing practices are permitted under Section 279 of the Railway Act. They are generally not opposed by Canadian shippers as necessarily leading to group monopoly pricing, even in markets in which rail service is the only or the most efficient mode available to shippers."

Heaver and Nelson note that rail-rail rate competition may be difficult to observe, for it almost never results in different rates being published. Rate rivalry in Canada takes place in confidential discussions of the railways as allowed under Section 279 of the Railway Act, rather than in the public arena of published rate schedules.

The most striking cases of price competition revealed in the case studies of Heaver and Nelson were situations in which either the CP, CN, or other railways had the opportunity to develop transport systems for a shipper to move traffic under an exclusive long-term contract. They cite the examples of mines in British Columbia and Ontario, and a forest products mill and a construction project in British Columbia, which were all accessible to at least two railways, and where negotiations on the facilities to be provided and the conditions of and rates for the transportation proceeded with the carriers remaining independent of each other in the negotiations. The authors do note, however, that at least in the case of the British Columbia copper mines, the presence of trucking competition and in some cases competition from the British Columbia Railway, may have added to the incentive for the railways to compete with one another.

Heaver and Nelson conclude that the railway tradition of working together does not eliminate all competitive rivalry between railways; indeed, their case studies even revealed instances of aggressive price competition (though such cases are exceptional, relative to the occurrence of service competition); they do, however, suggest that the effects of some restrictions on the practices of the Canadian railways should be investigated. One such restriction might be to limit the railways' freedom in common rate-making to through routes and joint rates. The authors do not explore the advantages and

disadvantages of possible restrictions but do argue that since Canadian and American railways operate their mainline systems at levels far closer to full utilization than in earlier times (with the result that the gap between marginal and average costs has been significantly lessened), open rate competition is far less likely to become ruinous today than in the past.

Competition Between Canadian and American Railways

Heaver and Nelson state that the use of local Canadian railway rates to border points to construct a combination rate through the U.S.A. to provide an effective alternative to a direct through route in Canada is not practical, because it leads to the imposition of a 30% customs duty under Section 382 of the Railway Act. The American railways can provide effective competition only where an American carrier serves the Canadian origin or destination, or where local trucking is available to move freight to the border at a reasonable rate.

In spite of these limitations, Heaver and Nelson found a number of cases in which Canadian railway rates can be explained by the competitive influence of rates existing in the U.S.A. In the case of the movement of canned goods from the Ontario peninsula, where American lines are present, the canned goods rates on the American railways influenced the Canadian rates into points close to the border. For example, the rate differential between movements to Calgary and to Edmonton from Eastern Canada is explained in terms of the competitive influence of American rail carriers plus trucking from Montana into the Calgary market. The same competitive influence does not extend as far as Edmonton, consequently the rail rates to that city are higher.

The CTC has no power to waive or vary the application of Section 382 of the Railway Act which requires the 30% customs tariff to be levied on goods shipped through the U.S.A under a combination rate. Heaver and Nelson suggest

that the CTC should be given some power to waive its application if found to be in the public interest. For example, if Canadian transport costs are to increase substantially because of rising demand, the "import" of lower-cost American transport service will be increasingly to the benefit of Canadian producers and consumers. This could be the case particularly for rate-sensitive, bulk commodities which might otherwise only have highly utilized Canadian railway lines available to them.

CTC

Recent analysis by the CTC concludes that rate and service competition between railways in Canada is limited, although there is little evidence on which to base this conclusion. The four mile interswitching limit and the legislative ability of the railways to set common rates are cited as the major factors which limit competition. Most major shippers (e.g. in the resource industries) are not directly connected with more than one railway, and those shippers who do have relatively unrestricted access to both railways are involved in the production of lower volume, higher valued goods in more populated areas. This latter type of shipper would also probably be in a position to receive the benefits of intermodal truck-rail competition as well. The growth over the last decade in the proportion of railway traffic shipped by resource producers means that a greater proportion of railway traffic is traffic which has access to only one carrier and hence is not subject to intra-modal rail competition.

With respect to common rate setting, the available data do not allow discovery of the extent to which carriers actually practice "price-fixing". However, the legislative ability of the railways to set common rates gives them the ability to limit competition and increases the negotiating leverage of the carrier with respect to certain shippers.

The analysis concludes that where the potential for competition exists the potential is greater for service competition than for rate competition. Nevertheless, where shippers appear captive to rail (e.g. resource shippers), market competition limits the extent to which the railways can increase freight rates. If freight charges price a commodity out of its market, the product will not move.

While intramodal price competition may not be strong, the fact that Canadian railways have not received high rates of return on investment and have shown high productivity gains suggests that intermodal competition has constrained the railways' ability to act as an effective duopoly.

The report suggests that there is only limited opportunity to achieve further reductions in railway costs by improving physical efficiency to offset revenues lost through competitive pressures on rates. Thus it is concluded that artificially increased intramodal rail freight competition, whether through forced infrastructure expansion or otherwise:

- "a) would not likely increase operational efficiency substantially above that obtained at present through the natural self interest incentive to increase efficiency to decrease cost, and also would not likely increase productivity substantially;
- b) would theoretically increase service adequacy, but likely at a higher price than in the current competitive environment, to compensate for additional fixed and variable cost;
- c) would likely decrease the average economic performance of rail carriers, and likely require increased public subsidies; and
- d) would not likely, on the medium/long term, improve the shippers' lot - all other things being equal - but may reduce the carriers' financial strength to reinvest for purposes of maintaining adequate service."

The analysis concludes that removal of Section 279 of the Railway Act which allows common rate making may push some rates closer to cost. Some shippers would gain by this, but others - particularly smaller shippers on higher cost railway segments - might lose. The analysis also concludes that there is little evidence to suggest that removal of this Section would increase competition to the benefit of any shipper.

McLAUGHLIN (1978)

This report summarizes the results of a questionnaire completed in the late fall of 1976 and early spring of 1977 by about 246 companies, 183 of them in the forest industry and 63 in the mining industry. The survey results are broken down province by province.

Exhibits 13 and 13a show the shippers' perceptions of service quality and price competition in Ontario. Slightly less than one-third of Ontario respondents reported strong rail-rail competition on service quality, while just over one-quarter reported strong price competition among the railways. In both cases, rail-rail competition was perceived to be much weaker than either truck-truck competition or rail-truck competition.

Extent of Intra-Rail Competition
In Ontario

It does not appear possible to outline in detail the extent to which shippers in Ontario are served by only one railway. Adequate statistics do not exist and the accuracy of a crude analysis using railway maps is limited by the fact that many shippers in a city or town served by two railways may have access to only one railway as a result of being located beyond the four

EXHIBIT 13EXISTENCE OF SERVICE QUALITY COMPETITION IN ONTARIO

<u>Mode Mix</u>	<u>% of Respondents Reporting Strong Competition</u>
Rail-Rail	31.1
Truck-Truck	59.3
Marine-Marine	33.3
Rail-Truck	66.7
Truck-Marine	0.0*
Rail-Marine	0.0*

EXHIBIT 13aEXISTENCE OF PRICE COMPETITION IN ONTARIO

<u>Mode Mix</u>	<u>% of Respondents Reporting Strong Competition</u>
Rail-Rail	26.7
Truck-Truck	56.0
Marine-Marine	0.0*
Rail-Truck	61.9
Truck-Marine	0.0*
Rail-Marine	0.0*

*All respondents claimed a weak degree of competition.

Source: McLaughlin, G.M., The Bulk Freight Shipper's Point of View:
A Survey on Transportation, CTC Report No. 30-78-05, 1978

EXHIBIT 14

RAIL SERVICE IN ONTARIO TOWNS AND CITIES

2,000 pop.

<div><div># of Railways</div><div>Region</div></div>	0	1	2	3	4
Eastern	1	13	12	-	-
Central	3	32	37	1	-
Southwestern	-	21	16	3	1
Northeastern	1	19	5	1	-
Northwestern	-	6	1	-	-

mile interswitching limit. Nonetheless, Exhibit 14 shows the number of towns and cities (pop. $>2,000$) in Ontario served by 0, 1, 2, 3, or 4 railways. In Eastern, Central and Southwestern Ontario about as many cities are served by two railways as are served by only one. In Northern Ontario, however, most communities have service by only one rail carrier. There are only five towns or cities of greater than 2,000 population which have no rail service and six which are served by more than two countries.

From the point of view of availability of competitive freight services, it is possible at least to draw a broad picture. Generally speaking, most shippers of manufactured goods who have access to only one railway have the opportunity to use trucking. In the resource industries, however, the bulk or weight of the commodities being shipped often effectively preclude the use of truck transport. Also, resource industry shippers are more likely to be in more remote areas which are not well served by truck transport.

The Effect of Market Competition on Railway Rates

In the absence of inter- or intra-modal competition, market competition remains as a constraint on freight rates. As noted in the review of the recent CTC analysis, if transportation costs price goods out of their markets, they will not be shipped at all. Heaver and Nelson (1977) examined the competitive influence of market competition and concluded that:

"... market competitive forces effectively limit the monopoly power of the railways in setting commodity rates for substantial volumes of rail traffic in Canada, particularly for raw materials moving in bulk. Therefore, the designation of rates which are not set on the basis of intermodal competition as "non-competitive rates" can lead to a serious misunderstanding about the nature and extent of competitive forces in rail transport markets. ...powerful competitive constraints operate on the 36 percent of rail ton-miles designated in the waybill analysis as non-competitive commodity rates."

Market competitive forces were found to apply throughout Canada to both raw materials and finished goods though it was easiest to identify in the case of raw materials sold in world markets.

Heaver and Nelson further conclude:

"The railways have been responsive to market competitive forces and have not been accused by shippers of gouging the maximum revenue possible on the basis of value-of-service pricing. Nor have they been able to turn whatever monopoly powers they may have to monopoly profits overall."

W. G. Scott (1978), who is General Manager, Pricing Economics, Canadian Pacific Railway, states that market competition is a much more effective regulator of freight rates than is modal competition. Commodity rates, he says, are by far the lowest rates in the rail freight rate structure, other than statutory grain rates.

SUMMARY

None of the reports reviewed addresses directly the question of whether or not shippers with access to only one railway are faced with generally higher rates or worse service than those with access to more than one railway. The conclusion that the four-mile interswitching limit is too restrictive does imply, however, that shippers benefit in some way from having access to two or more railways. In the absence of changes in the current common rate-making procedures, this benefit would probably be mainly in the form of greater service competition.

Market competition is independent of the number of railways serving a shipper, and thus where it occurs, the rates charged the shipper who is captive

to one railway may be constrained at a level no higher than those charged shippers with competitive alternatives. The extent to which this is the case in Ontario cannot be determined from current published reports.

EXHIBIT 15

1972 PUBLIC TRANSPORT MODAL FREQUENCY

NODE	POP'N.	/----BUS----			/---RAIL---			/----AIR----			/--ALL MODES/		
		OUT	IN	TOT	OUT	IN	TOT	OUT	IN	TOT	OUT	IN	TOT
34 CORNWALL	47116	98	98	196	42	42	84	0	0	0	140	140	280
35 OTTAWA/HULL	602510	365	365	730	92	85	177	250	262	512	707	712	1419
36 BROCKVILLE	19765	67	67	134	63	63	126	0	0	0	130	130	260
37 KINGSTON	85877	193	193	386	48	48	96	0	0	0	241	241	482
38 BELLEVIL/TRENTON	63778	48	48	96	54	47	101	0	0	0	102	95	197
39 PETERBOROUGH	63531	105	105	210	7	7	14	0	0	0	112	112	224
40 OSHAWA/WHITBY	120318	320	320	640	47	48	95	0	0	0	367	368	735
41 TORONTO/MISSISSA	2628043	1152	1152	2304	214	220	434	877	899	1776	2243	2271	4514
42 HAMILTON	498523	618	618	1236	126	126	252	266	279	545	1010	1023	2033
43 ST CATHS/NIAGRA	280316	309	309	618	21	21	42	0	0	0	330	330	660
44 KITCHENER/WATERL	226846	209	209	418	51	51	102	0	0	0	260	260	520
45 LONDON	286011	149	149	298	158	166	324	67	62	129	374	377	751
46 SARNIA	78444	26	26	52	28	20	48	6	10	16	60	56	116
47 CHATHAM	35317	62	62	124	56	56	112	0	0	0	118	118	236
48 WINDSOR	258643	58	58	116	28	28	56	56	53	109	142	139	281
49 HARRIE	38176	186	186	372	32	32	64	0	0	0	218	218	436
50 PEMBROKE	16544	69	69	138	28	28	56	10	10	20	107	107	214
51 NORTH BAY	49187	130	130	260	58	58	116	33	33	66	221	221	442
52 SUDBURY	155424	98	98	196	52	49	101	69	61	130	219	208	427
53 SAULT STE. MARIE	81270	55	55	110	7	7	14	46	32	78	108	94	202
54 F ERIE/WELLAND	23113	116	116	232	7	7	14	0	0	0	123	123	246
55 KIRKLAND LAKE	27427	70	70	140	14	14	28	18	24	42	102	108	210
56 TIMMINS	28542	45	45	90	7	7	14	27	27	54	79	79	158
57 KAPUSKASING	12834	28	28	56	27	13	40	0	0	0	55	41	96
58 THUNDER BAY	112093	54	54	108	17	17	34	61	42	103	132	113	245
59 WINNIPEG/SELKIRK	549593	136	136	272	46	54	100	251	249	500	433	439	872
60 PORTAGE LA PRAIR	12950	133	133	266	51	42	93	0	0	0	184	175	359
61 BRANDON	31150	108	108	216	30	33	63	10	10	20	148	151	299
62 THOMPSON	19001	14	14	28	5	6	11	20	13	33	39	33	72
63 KENORA	10952	47	47	94	14	14	28	15	15	30	76	76	152

Source: Transport Canada, An Interim Report on Inter-City Passenger Movement in Canada, June, 1975.

III - INTERMODAL COMPETITION IN PASSENGER TRANSPORTATION

Four reports provide information on the extent of competition between rail, air and bus in providing passenger transportation in Ontario: Transport Canada (1975), IBI Group (1977), Transport Canada and Ontario MTC (1979), and Canadian Transport Commission (1979).

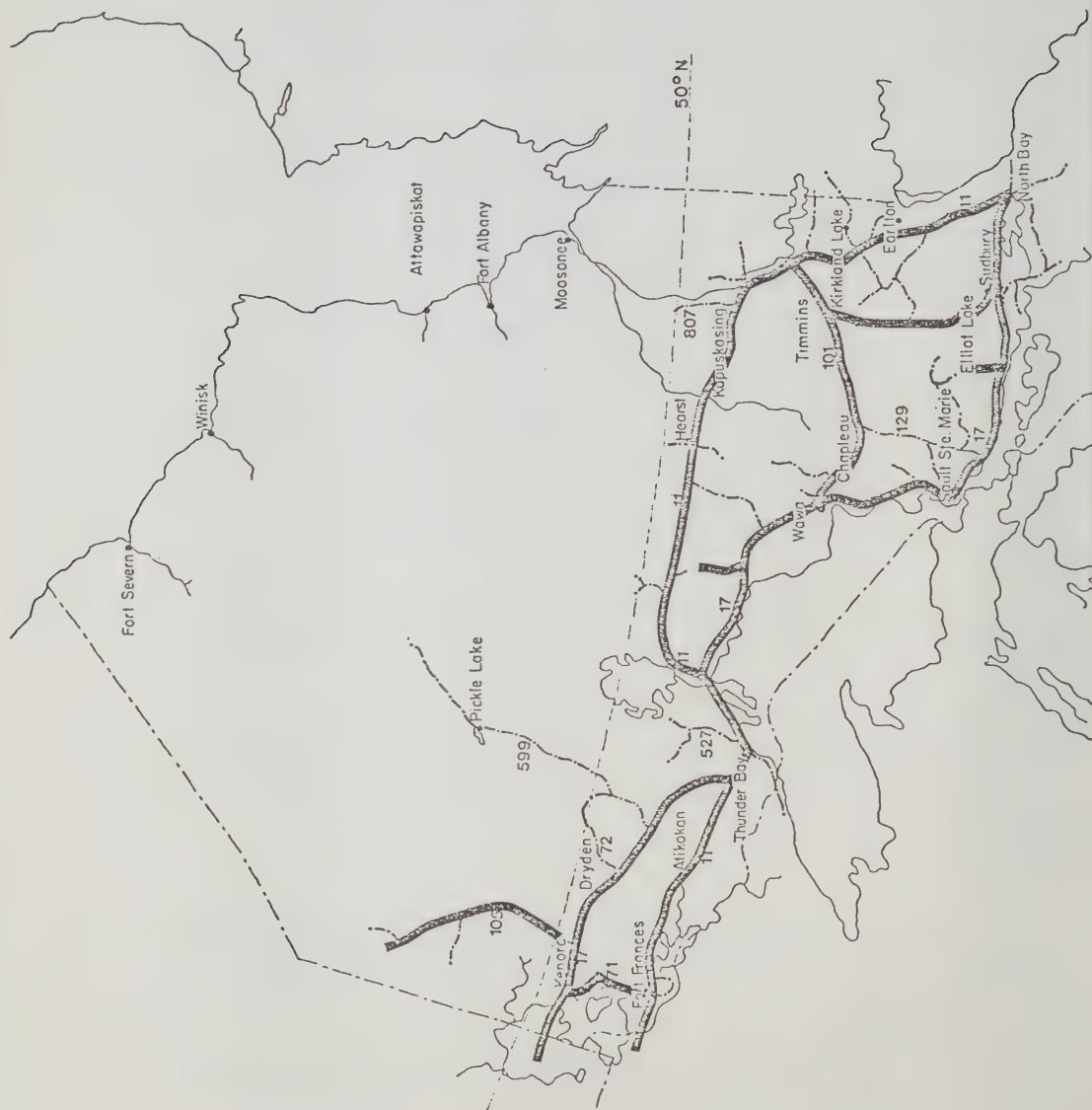
The 1975 Transport Canada study concluded that, overall, intermodal passenger competition is limited, but is most intense in the short to middle distance ranges. On trips of greater than 500 miles, the great time-saving advantage of air travel over surface modes allows the airlines to command a much greater share of the market than bus or rail. Within the 200-500 mile range, however, bus, rail and air are reasonably competitive with one another. As distances get smaller, the time advantage of air travel shrinks and the difference between air fares and surface fares increases.

The potential for intermodal competition is restricted by the extent of services of the three modes. The Transport Canada report included a table showing the frequency of service for each mode at major communities across Canada in 1972. The Ontario portion of the table is reproduced here as Exhibit 15. Of the 26 communities, all had access to at least two modes, and 14 had service by 3 modes.

The 1977 IBI Group report provides information on modal access for communities in northern Ontario. Exhibits 16 to 19 show the bus, rail and major air routes in the north. South of Latitude 50°N most major communities are served by all three modes, though some are limited to two. Communities

EXHIBIT 16

NORTHERN ONTARIO
Bus Routes in
Northern Ontario



Source: IBI Group, 1977

NORTHERN ONTARIO
Rail Network

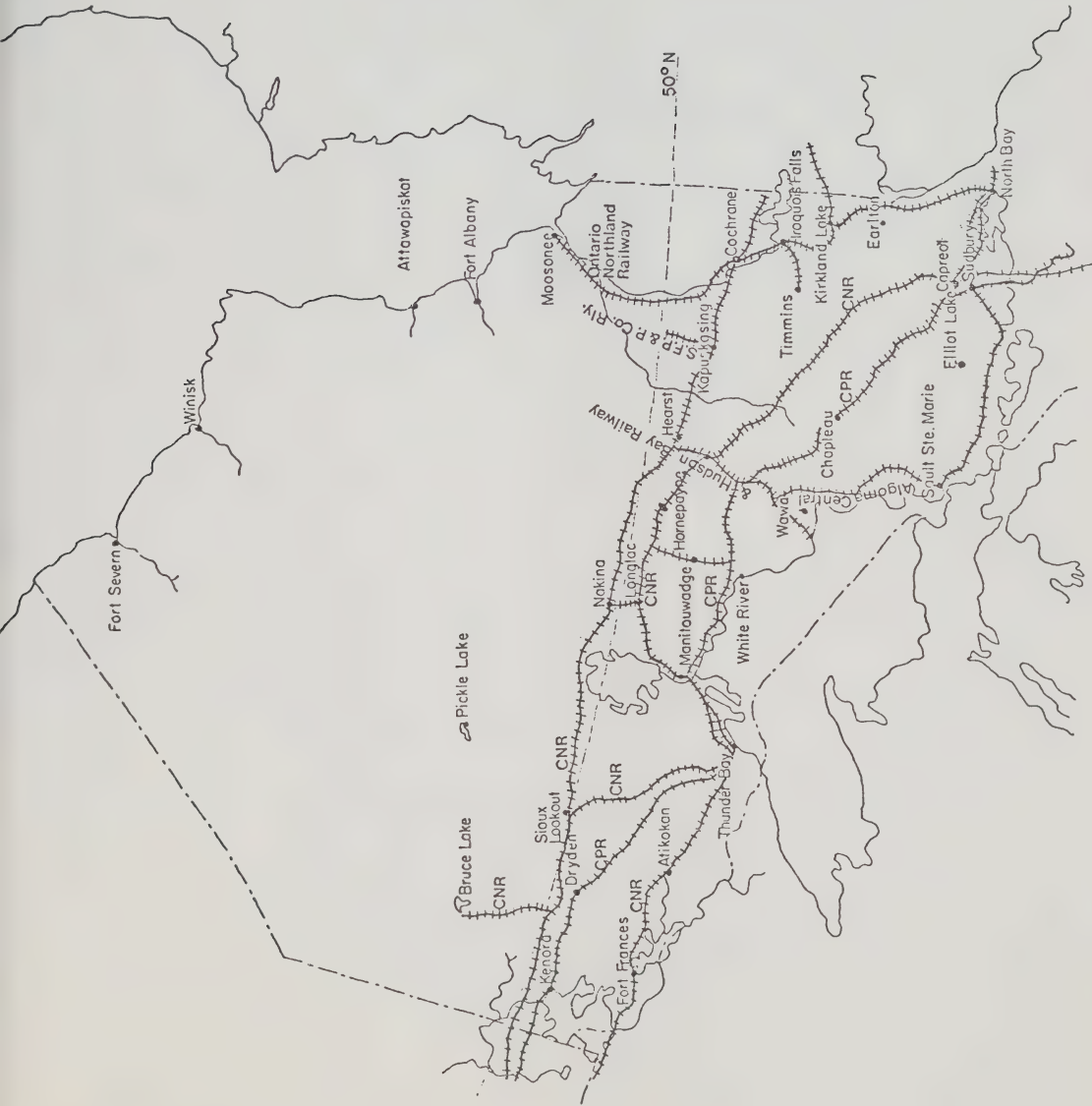
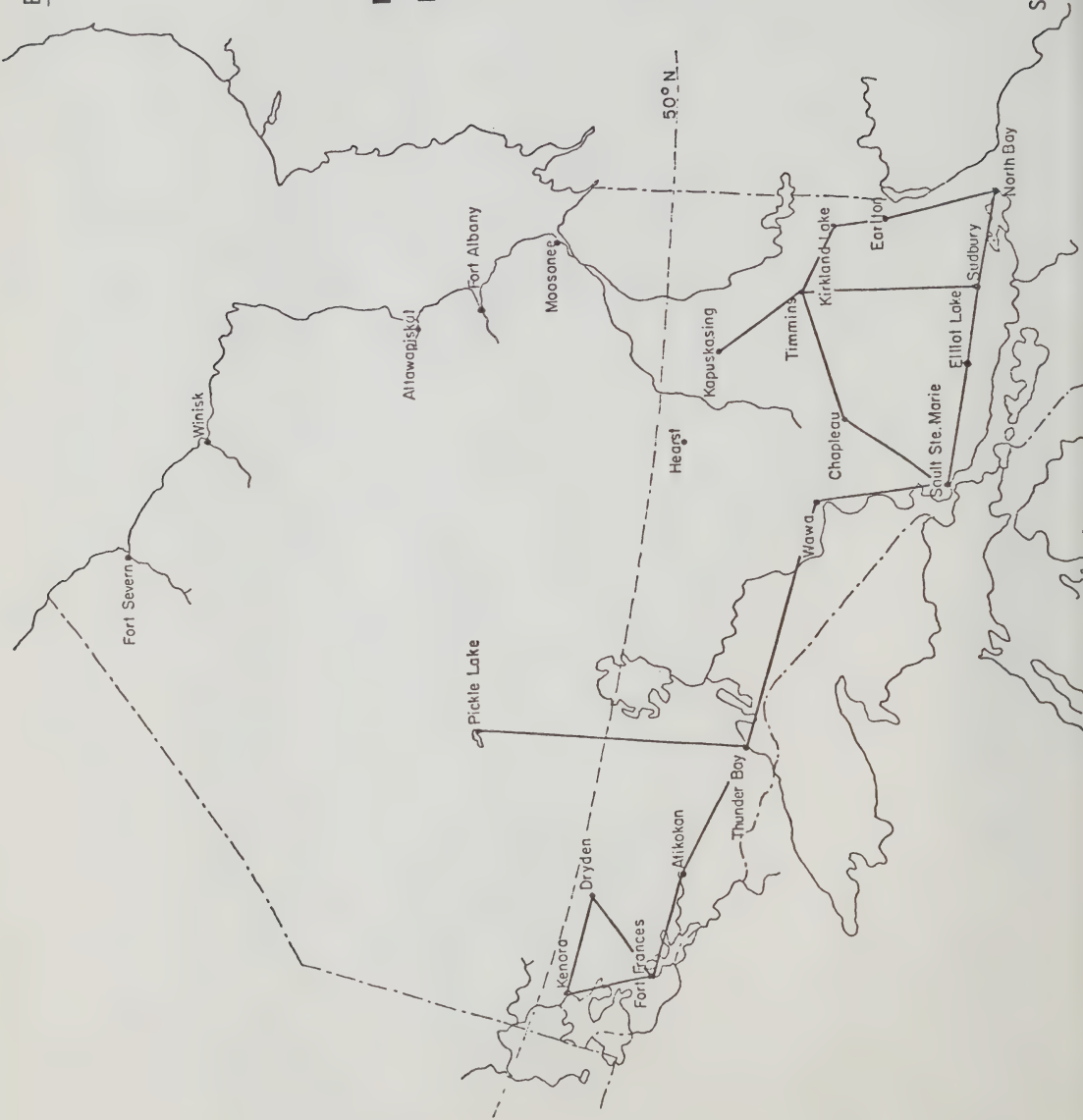


EXHIBIT 18

NORTHERN ONTARIO
NorOntair Network



Source: IBI Group, 1977

NORTHERN ONTARIO Remote Air Services And Airports North of 50°N

- Norontair
- Bearskin
- Slate Falls
- Patricia
- Austin/White
- Tomahawk
- Airports North of 50°
- Airports South of 50°
- Affix denotes weekly frequency one-way

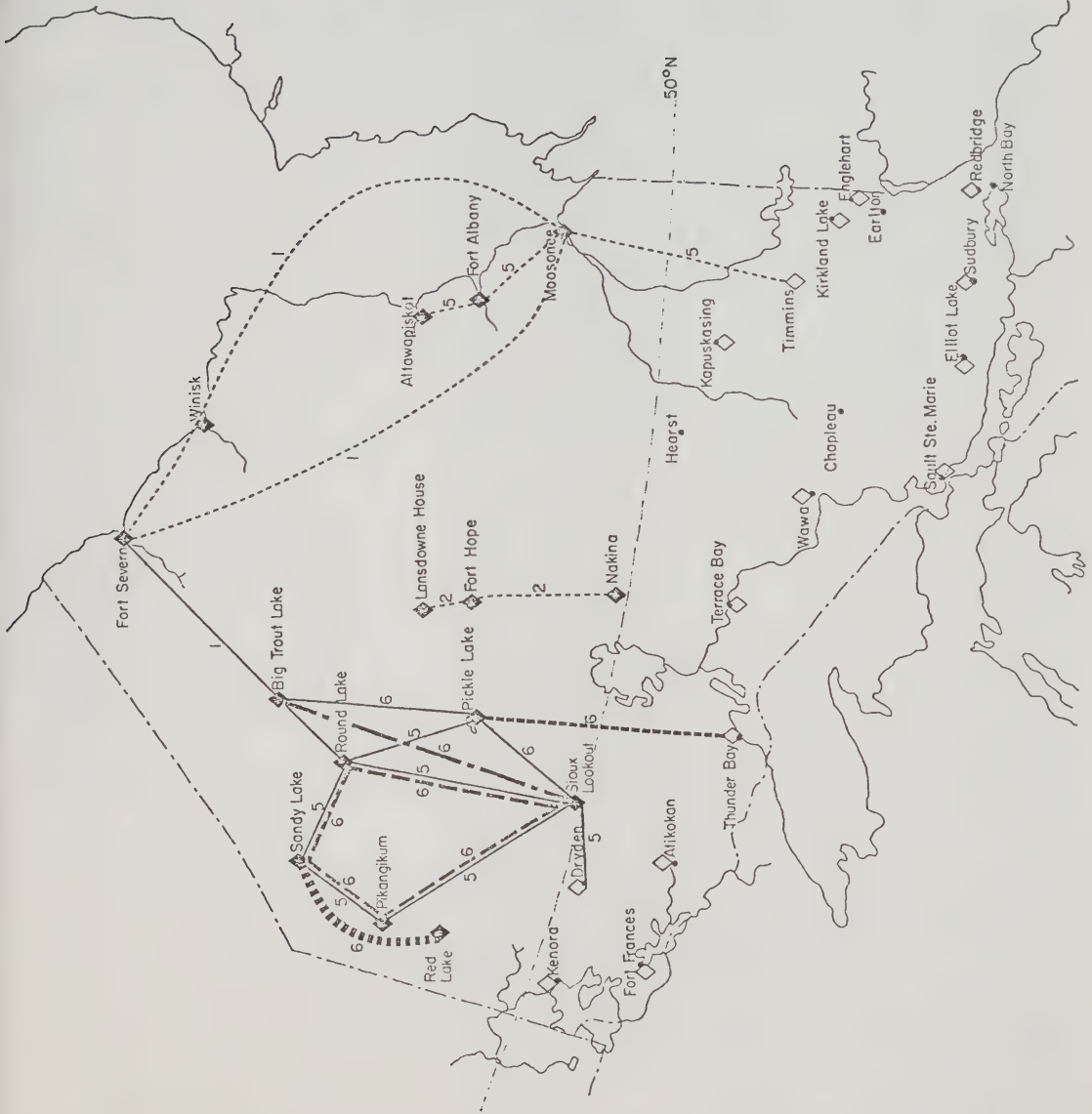


EXHIBIT 20

TRANSPORTATION SERVICES TO COMMUNITIES NORTH OF LATITUDE 50

PLACE NAME	1974 POPULATION	MODES AND CARRIERS									
		Austin Bearskin Hooker Air NorOntair State Falls Tomahawk	Algoma Central CNR Ontario Northland Smoky Falls	Excel Coach	Arnone CN Central Kingsway-Dalewood Koval Lakehead Motorways Smith Soo Security Star Two Bay						
		AIR	RAIL	BUS	TRUCK						
Alcona											
Allan Water	90		X								
Amesdale			X								
Armstrong	574		X		A						
Aroland			X								
Attawapiskat	532	X									
Auden			X								
Balmertown	1937		X								
Bearskin Lake	4										
Big Trout Lake	26	X X									
Buildings											
Camp Robinson	130										
Casummit Lake											
Cat Lake											
Cavell	6		X								
Central Patricia	99										
Cochenour	610										
Collins			X								
Coral	24		X								
Deer Lake	17										
Ear Falls	1979										
Ear Falls Station											
Farlane											
Favourable Lake											
Ferland	87		X								
Fort Albany		X									
Fort Hope		X									
Fort Severn		X									
Foxville	3										
Galeton	1		X								
Ghost River			X								
Goldpines	51										
Hudson	543		X								
Jackson Manion											
Kapiskau											
Kashechewan		X									
Kowkash	16		X								
Lac Seul	30										
Lake River											
Lansdowne House	1	X	X								
Madsen	500										
Mammanattawa											
McDougall Mills			X								
McKenzie Island	260										
Moose Factory	848		X								

Continued.....

EXHIBIT 20
(Continued)

TRANSPORTATION SERVICES TO COMMUNITIES NORTH OF LATITUDE 50

		MODES AND CARRIERS									
PLACE NAME	1974 POPULATION	Austin Bearskin Hooker Air NorOntair State Falls Tomahawk	Algoma Central CNR Ontario Northland Smoky Falls	Excel Coach	Arnone CN Central Kingsway-Dalewood Koval Lakehead Motorways Smith Soo Security Star Two Bay						
		AIR	RAIL	BUS	TRUCK						
Moose River	75										
Moosonee	1793	X	X							A	
Ilakina	621		X		A	T	T	A	T		
Ogoki											
Onakawana	3		X								
Osnaburgh House											
Otter Rapids			X								
Pagwa River	58		X								
Patricia			X								
Perrault Falls	8			X		A		T	T	A	
Pickle Crow						T	A	T	T		
Pickle Lake	184					T	A	T	T		
Pikangikum		X	X								
Ranoke	8										
Red Lake	2155			X		A		T	T	A	
Renison	7			X							
Round Lake		X									
Sandy Lake	18	X	X								
Savant Lake	202					A	A	T	T		
Sioux Lookout	2826										
Smoky Falls	53			X							
Starrat Olsen	88										
Superior Junction	17		X								
Tashota	1		X								
Thaddeus											
Windigo Lake											
Winisk		X									
Wunnummin Lake											

LEGEND:

X : Service Provided

A : Unrestricted Truck Service to Specified Points

T : Truck Service Involves Transfer

Source: Published timetables (Summer, 1977) of passenger carriers
"Ship by Truck Directory", Ontario Trucking Association

EXHIBIT 21

**ANNUAL PERSON TRIPS BY MODE
BETWEEN TORONTO AND 6 URBAN CENTRES
1976**

CITY PAIR	TRIPS ('000'S)				
	AIR	RAIL	BUS	AUTO	TOTAL
TORONTO - MONTREAL	992	454	130	1070	2646
TORONTO - OTTAWA	501	76	245	1100	1922
TORONTO - LONDON	30	293	135	2141	2599
TORONTO - WINDSOR / DETROIT	150	231	88	1620	2089
TORONTO - SUDBURY	90	31	79	300	500
TORONTO - NORTH BAY	26	20	41	280	367
TOTAL TORONTO	1789	1105	718	6511	10123
MARKET SHARE (%)	18	11	7	64	100

SOURCE : VARIOUS CARRIER AND OFFICIAL STATISTICS.

Source: Transport Canada and Ontario Ministry of Transportation and Communications, Southern Ontario Multimodal Passenger Studies, September, 1979.

served by all three include:

Kenora	Thunder Bay	Kapuskasing	Sudbury
Fort Frances	Wawa	Timmins	North Bay
Dryden	Sault Ste Marie	Kirkland Lake	Earlton
Atikokan	Chapleau	Elliot Lake	

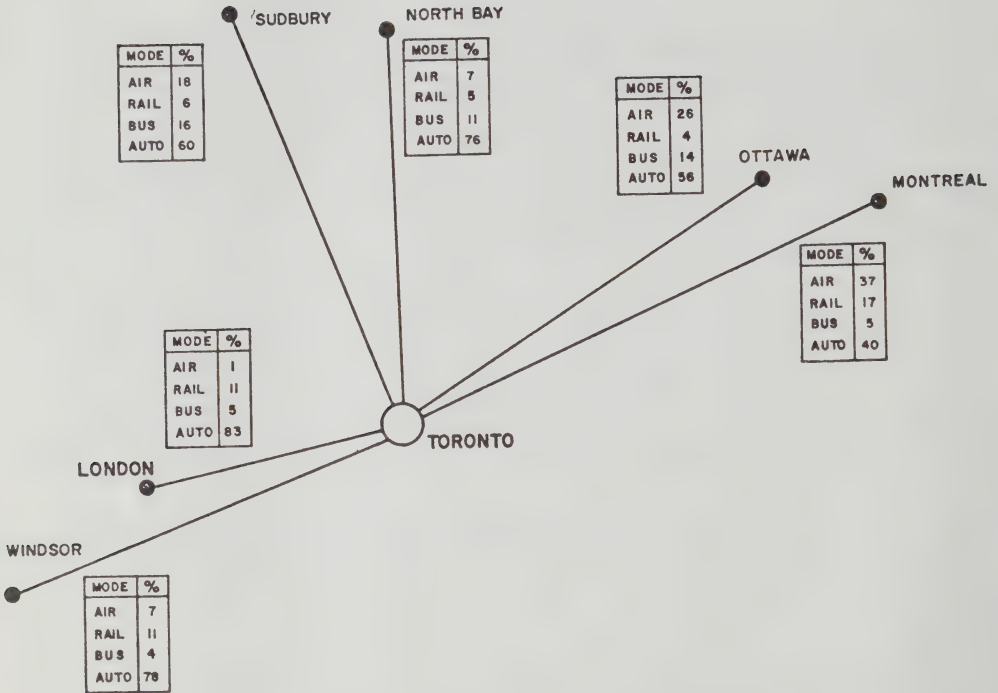
North of 50⁰ latitude, however, access to passenger services is much more limited. About one-third of the communities have rail service, slightly less than 20 percent are served by "third-level" air carriers, one is served by NorOntair, and only two have access to bus service. Exhibit 20 shows the range of transportation services in these communities.

The 1979 Transport Canada report provides data on modal shares in passenger transportation in southern Ontario. Intercity travel within this area generally consists of trips shorter than 500 miles and thus all three modes have an opportunity to be reasonably competitive with one another. The three public modes are, however, dominated by the private auto which has about 64 percent of the total market between Toronto and 6 urban centres (see Exhibit 21). Air serves 18 percent of the total market between these same city pairs, and captures as much as 37 percent on individual routes (Montreal-Toronto). Rail and bus carry on average less than 20 percent of the passengers between Toronto and these 6 other cities. Rail has a larger share than bus in the Montreal-Windsor corridor, but a lower share on other routes such as Toronto-Ottawa and Toronto-Sudbury.

Exhibit 22 shows the modal shares for each of the 6 city pairs. These figures by themselves tell a great deal about the relative levels of service offered by the various modes. For example, Ottawa, Sudbury and Windsor are about equidistant from Toronto (240 miles), yet the modal shares on travel between them and Toronto are quite different. Ottawa has the highest proportion

EXHIBIT 22

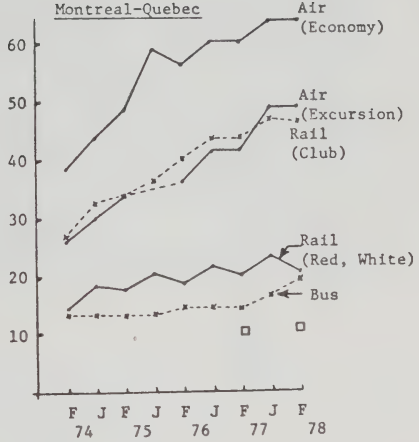
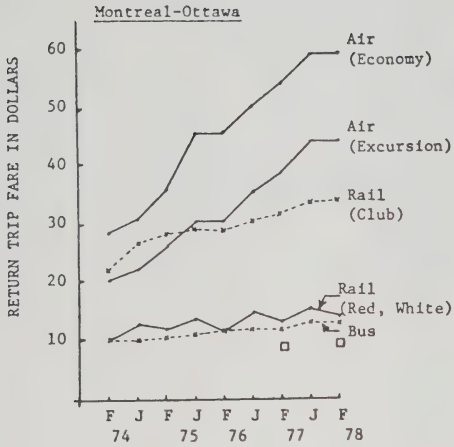
MODAL SHARE OF INTERCITY TRAVEL
FOR 6 CITY PAIRS
1976



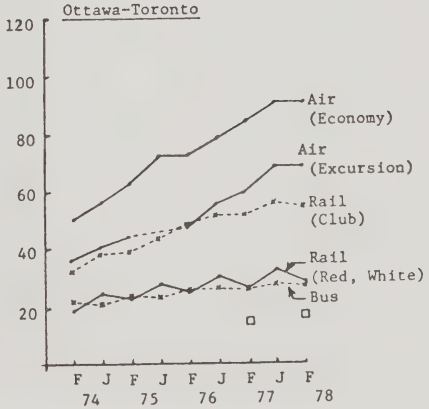
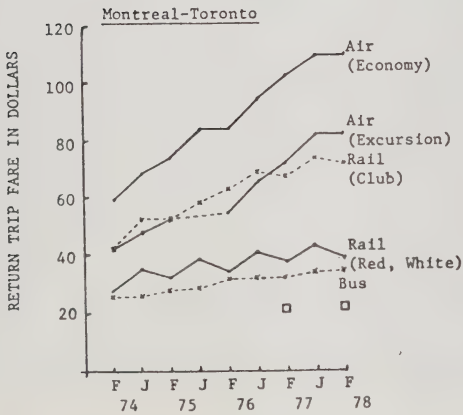
Source: Transport Canada and Ontario Ministry of Transportation and Communications, Southern Ontario Multimodal Passenger Studies, September, 1979.

EXHIBIT 23

COMPARISON OF 1974-1978 RAIL, AIR AND BUS FARES



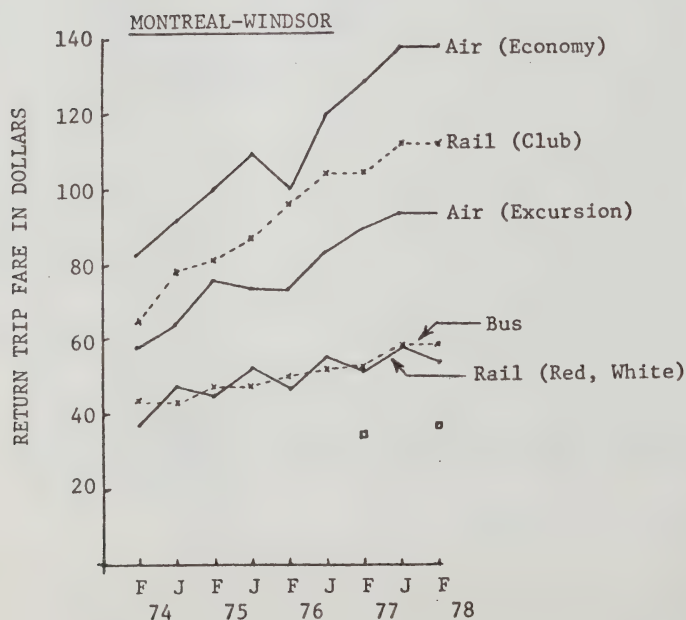
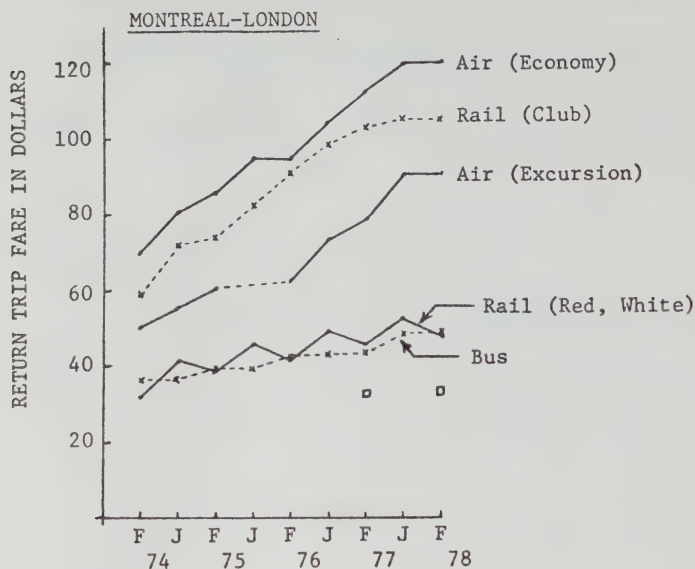
No air excursion fares for July 1975.



□ CN Blue Fare plus 10 percent.

EXHIBIT 23
(Continued)

COMPARISON OF 1974-1978 RAIL, AIR AND BUS FARES



□ CN Blue Fare plus 10 percent.

Source: Canadian Transport Commission, Corridor Rail Services: Review of Fares and Revenue, Report No. 40-79-04, April, 1979

of air travel and the lowest by rail, reflecting, in part, the high level of air service and the relatively poor level of train service. Windsor, which has the lowest level of air service of the three cities, also has the lowest proportion of travel by that mode and the highest proportion of rail and auto travel. The 3 cities along the Montreal-Windsor corridor, (Montreal, London, Windsor) which has good rail service, have the highest proportions of rail travel (17, 11 and 11 percent, respectively) and the lowest proportions of bus travel (5, 5 and 4 percent).

The degree of competition between modes is reflected not only in the factors of service frequency and travel times but also in fares. The Canadian Transport Commission (1979) report contains a comparison of rail, air and bus fares between 6 city pairs in the Quebec-Windsor corridor from 1974-78.

Exhibit 23 illustrates the comparison of rail, air and bus fares. In general, bus fares matched CN Red fares and were less than CN White fares, except on the Montreal-Quebec route where until February, 1978, bus fares were lower than both types of rail fare (up to 25 percent lower than Red fares). The introduction of the Blue plus 10 percent plan in 1976 reduced return trip rail fares to as much as 30 percent less than comparable bus fares. For the most part, CN Club fares were higher than excursion air fares, but economy air fares exceeded Club fares in all cases by a substantial amount.

The fare data used to plot Exhibit 23 are given in Exhibits 23, 25 and 26. Exhibit 27 provides up-to-date fares for the 6 city pairs. The CN fares used in the CTC analysis have been replaced by VIA Rail fares. For all 6 pairs, bus fares are less than rail fares, ranging from about 5-25 percent less for regular fares but only about 0-10 percent less on excursion fares. Air fares,

EXHIBIT 241974-1978 CN TRANSPORTATION AND CLUB CAR FARESCN RETURN TRIP TRANSPORTATION CHARGES

	Montreal- Ottawa	Montreal- Quebec	Montreal- Toronto	Ottawa- Toronto	Montreal- London	Montreal- Windsor
1974 Feb.	\$10.00	\$14.50	\$27.50	\$19.50	\$32.00	\$38.00
July	12.50	18.50	35.00	24.50	41.00	48.00
1975 Feb.	12.00	17.50	32.00	23.50	38.00	45.00
July	13.00	20.00	38.50	28.00	46.00	52.00
1976 Feb.	12.00	18.00	34.50	25.00	41.50	47.00
July	14.00	21.50	40.50	30.00	49.00	55.00
1977 Feb.	13.00	19.50	37.50	27.00	45.00	51.00
July	15.00	23.00	43.00	32.00	52.00	58.50
1978 Feb.	13.50	20.50	39.00	28.50	47.00	54.00

CN RETURN TRIP CLUB FARES

	Montreal- Ottawa	Montreal- Quebec	Montreal- Toronto	Ottawa- Toronto	Montreal- London	Montreal- Windsor
1974 Feb.	\$22.00	\$26.50	\$42.50	\$31.50	\$59.00	\$65.00
July	26.50	32.50	52.00	38.50	72.00	79.00
1975 Feb.	28.00	33.50	52.00	39.50	74.00	81.00
July	29.00	36.00	58.50	44.00	82.00	88.00
1976 Feb.	28.00	40.00	62.50	47.00	91.50	97.00
July	30.00	43.50	68.50	52.00	99.00	105.00
1977 Feb.	31.00	43.50	67.50	51.00	103.00	105.00
July	33.00	47.00	73.00	56.00	106.00	112.50
1978 Feb.	33.50	46.50	71.00	54.50	105.00	112.00

Source: Canadian Transport Commission, Corridor Rail Passenger Services:
Review of Fares and Revenue, Report No. 40-79-04, April, 1979

EXHIBIT 251974-1978 ECONOMY AND EXCURSION AIR FARESRETURN TRIP ECONOMY AIR FARES

	Montreal- Ottawa	Montreal- Quebec	Montreal- Toronto	Ottawa- Toronto	Montreal- London	Montreal- Windsor
1974 Feb.	\$28.00	\$38.00	\$ 60.00	\$50.00	\$ 70.00	\$ 84.00
July	32.00	44.00	68.00	56.00	80.00	92.00
1975 Feb.	36.00	48.00	74.00	62.00	86.00	100.00
July	46.00	58.00	84.00	72.00	96.00	110.00
1976 Feb.	46.00	56.00	84.00	72.00	96.00	100.00
July	50.00	60.00	94.00	78.00	104.00	120.00
1977 Feb.	54.00	60.00	102.00	84.00	112.00	128.00
July	58.00	64.00	108.00	90.00	120.00	138.00
1978 Feb.	58.00	64.00	108.00	90.00	120.00	138.00

RETURN TRIP EXCURSION AIR FARES

	Montreal- Ottawa	Montreal- Quebec	Montreal- Toronto	Ottawa- Toronto	Montreal- London	Montreal- Windsor
1974 Feb.	\$20.00	\$26.00	\$42.00	\$36.00	\$50.00	\$ 58.00
July	22.00	30.00	48.00	40.00	56.00	64.00
1975 Feb.	26.00	34.00	52.00	44.00	60.00	77.00
July	30.00*	-	68.00*	-	-	74.00*
1976 Feb.	30.00	36.00	55.00	47.00	62.00	74.00
July	35.00	42.00	66.00	55.00	73.00	84.00
1977 Feb.	38.00	42.00	71.00	59.00	78.00	90.00
July	44.00	48.00	81.00	68.00	90.00	104.00
1978 Feb.	44.00	48.00	81.00	68.00	90.00	104.00

* Nordair excursion fares. Air Canada and CP Air did not have excursion fares in July, 1975.

Source: Canadian Transport Commission, Corridor Rail Passenger Services: Review of Fares and Revenue, Report No. 40-79-04, April, 1979.

EXHIBIT 261974-1978 RETURN TRIP BUS FARES

	Montreal- Ottawa	Montreal- Quebec	Montreal- Toronto	Ottawa- Toronto	Montreal- London	Montreal- Windsor
1974 Feb.	\$10.00	\$13.50	\$26.90	\$21.30	\$35.95	\$43.95
July	10.00	13.50	26.90	21.30	35.95	43.95
1975 Feb.	10.75	13.50	28.80	22.80	38.90	47.05
July	10.75	13.50	28.80	22.80	38.90	47.05
1976 Feb.	11.90	14.65	31.75	25.10	41.85	50.00
July	11.90	14.65	31.75	25.10	42.90	51.90
1977 Feb.	11.90	14.65	31.75	25.10	42.90	51.90
July	12.85	16.95	34.30	27.20	47.80	58.85
1978 Feb.	12.85	19.80	34.30	27.20	47.80	58.85

Source: Canadian Transport Commission, Corridor Rail Passenger Services:
Review of Fares and Revenue, Report No. 40-79-04, April, 1979

EXHIBIT 27RETURN TRIP FARES, JULY 1980

	MONTREAL- OTTAWA	MONTREAL- QUEBEC	MONTREAL- TORONTO	OTTAWA- TORONTO	MONTREAL- LONDON	MONTREAL- WINDSOR
<u>VIA Rail</u>						
Regular Fare	20.00	28.00	52.00	44.00	68.00	80.00
3-Day Excursion	13.00	18.00	34.00	29.00	45.00	53.00
Club Fare	35.00	43.00	77.00	59.00	99.00	111.00
<u>Air Canada</u>						
Economy	88.00	96.00	142.00	126.00	158.00	178.00
Weekend Excursion	66.00	72.00	10.700	95.00	119.00	134.00
<u>Voyageur Colonial</u>						
Regular Fare	14.80	23.20	41.90	37.30	60.20	75.00
3 or 5-Day Excursion			29.95	27.50	41.95*	52.95*

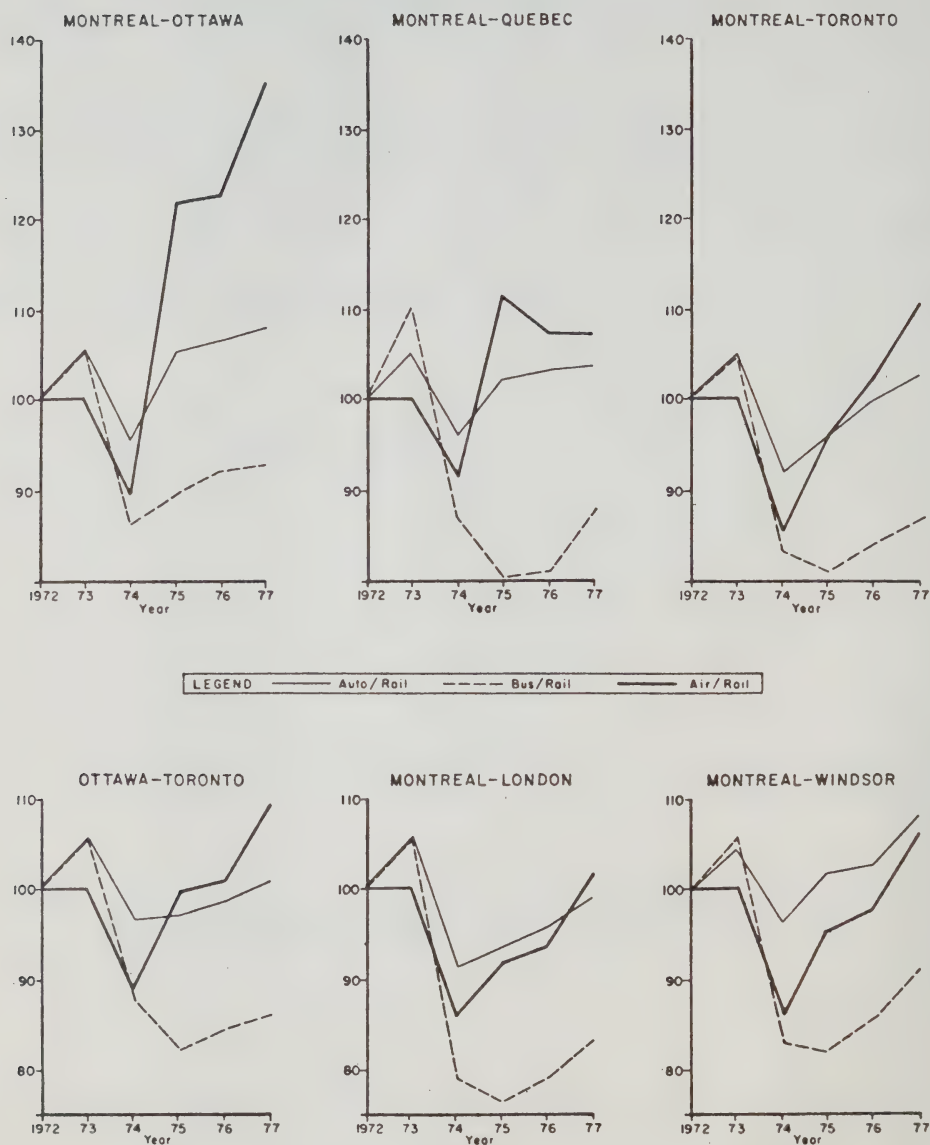
*5-day excursion on Montreal-Toronto portion, 3-day on remainder.

Source: VIA Rail, Air Canada and Voyageur Colonial Information services,
July 7, 1980.

EXHIBIT 28

INDICES OF RELATIVE FARE CHANGES

JULY 1972 = 100



Source: Canadian Transport Commission, Corridor Rail Passenger Services: Review of Fares and Revenue, Report No. 40-79-04, April, 1979

both excursion and economy, are a minimum of about 20 percent higher than rail Club fares.

The CTC analysis also provided indices of relative fare changes for the rail mode compared to the air and bus modes.* These are shown in Exhibit 28. The indices were constructed by indexing the individual rail, air and bus fares for each city pair and then taking the ratio of air and bus fares to the rail index. Return economy fares for air, coach, rail fares and standard bus fares were used in all cases.

The comparisons in Exhibit 28 show that increases in rail fares exceeded the increases in air and bus fares during 1972-74 by amounts ranging from 5-20 percent. Increases in air fares have exceeded rail fare increases since the onset of rapidly rising oil prices in 1973. In 1973 bus fares increased relative to rail fares for all city pairs, but this was reversed in 1973-75 when rail fares rose sharply relative to bus fares. From 1975-77 bus fares increased relative to rail fares, although over the 1972-77 period as a whole, rail fares increased by an average of about 12 percent more than bus fares for the 6 city pairs, thus adding a competitive advantage to bus transport. From July, 1974 to July, 1980, however, percentage increases in bus fares were on average about 3 percent more than rail fare increases.

The greatest net change in air fares relative to rail fares occurred on the short-haul Montreal-Ottawa route. For longer routes the relative increase in air fares was much less, which suggests the incentive to shift from air to rail has been greatest on the short routes.

*An index for auto "fares" was also constructed, though it is not discussed here.

SUMMARY

The extensive coverage of bus routes in southern Ontario means that the rail mode faces competition from the bus on all rail routes. The reverse is not true, however, as there are many bus routes without rail competition. In the heavily travelled Quebec-Windsor corridor, competition between bus and rail appears quite intense; the modal share data show rail to attract the greater share of the passenger market in this corridor, though bus has the greater share outside the corridor where the level of rail service is lower. Within the corridor bus and rail fares are competitive with one another with the bus having some advantage in all cases. Air fares are substantially higher than bus or rail fares on all routes.

In northern Ontario rail service is more extensive than bus or air service. South of Latitude 50°N , however, most major communities are served by all three. North of 50°N , public passenger transport is overall less accessible. Rail and air are the dominant modes in this area.

IV - INTERMODAL COMPETITION IN FREIGHT TRANSPORTATION

Intermodal competition in freight transport, particularly between rail and truck, is perhaps the most widely addressed of the topics covered in this paper. Transport Canada (1975), Heaver and Nelson (1977, 1980), Scott (1978), Taylor (1979) and Wolff and Kuczer (1979) examine the issue from a general, national perspective, while McLaughlin (1978), Ontario MTC (1975, 1979), IBI Group (1977), Ontario MIT (1980) provide data specific to Ontario. The general conclusions of Heaver and Nelson and of Taylor are summarized first, followed by a presentation of data taken from the other sources.

HEAVER AND NELSON (1977)

The authors' main conclusions with respect to intermodal competition in transport markets since 1967 are that the McPherson Commission was correct in viewing it as a pervasive force affecting most commodity movement and that the Commission was also correct in recommending that the railways be given wide freedoms to set freight rates. The evidence of the case studies, and of other published studies, suggests that the reach of trucking competition has continued to increase since 1967.

The ability of the railways to respond to intermodal competition has been important in enabling them to react immediately to competitive pressures and, thereby, retain profitable traffic which might otherwise have been lost. It has also been important to shippers, as they have been able to use intermodal alternatives (both actual and potential) to gain reductions in rail rates and to stimulate the railways to more efficiency, both by reducing costs and rates and by improving services. The authors note, however, that it is not

possible to measure quantitatively the extent to which intermodal competition influences railway rates and services. In part, this is because of the inadequacies of Canadian transport statistics, but more importantly it is because of the nature of dynamic competition in transport.

The authors point out that intermodal competition is not an effective constraint on railway pricing practices on all traffic. The major bulk commodities of grain, coal, potash and sulphur in western Canada are obvious examples of commodities only affected to a limited extent, or not at all, by trucking competition. Nevertheless, this does not mean that trucking competition is a regional phenomenon. Such a view may lead to both an underestimate of the importance of trucking in the west and an overestimate of its pervasiveness in the east.

R. B. TAYLOR (1979)

In a paper to the Canadian Transportation Research Forum, entitled "Transport Competition - Advantages and Limitations: A Shippers' Perspective", Taylor identified three categories of shippers (these refer to manufacturers):

- a) shippers having a large volume of bulk commodities and/or carload or truckload shipments;
- b) shippers whose volumes are smaller and whose shipments are generally in less than full truckload or carload quantities;
- c) shippers of small shipments generally a few hundred pounds or less.

Taylor, who is Director of Transportation for the Canadian Manufacturers' Association, states that competition for the freight shipments of the first group is generally aggressive in the industrially developed regions of Canada. However, he concludes that the National Transportation Act of 1967 offers too little protection to the shipper who is captive to the rail mode.

While the provisions of Section 23 of the Act* may have had some salutary effect on railway pricing, they have not proved to be a practical avenue of relief. (Section 23 is discussed further at the end of this chapter).

Taylor states that for the second group of shippers, price competition between modes is less evident and price or service competition between the carriers in a particular mode frequently appears to be non-existent. Whereas the carload or truckload shipper finds carriers receptive to reducing rates to meet market competitive situations for particular commodities, carriers appear to have little, if any, flexibility when dealing with similar situations for less than truckload quantities. Taylor concludes that the shipper in this category has little, if any, opportunity at least in practice to benefit from modal competition. Frequently, if he wishes to ship he may do so only at a predetermined, established, and inflexible price.

Shippers in the third category have the greatest number of alternatives for shipping goods. These include the railway express companies who offer separate rate structures for small shipments, courier services, and various small parcel carriers, as well as the Post Office. For more urgent shipments air freight, express and air package services offer speedy service at higher cost. This area is perhaps the one where the greatest price and service competition is evident to date.

* Section 23 of the National Transportation Act replaces Section 317 of the Railway Act which had enabled shippers to appeal rail rates on the grounds of unjust discrimination. Section 23 requires shippers to demonstrate a *prima facie* case of injury to the public interest before a consideration of redress can be obtained from the CTC. The Act does not limit the definition of the public interest. Section 23 is not limited to rates, but also applies to any act or omission of a carrier.

EXTENT AND INFLUENCE OF INTERMODAL COMPETITION - CANADA

One measure of the extent and influence of intermodal competition is the proportion of rail traffic moving under competitive rates and agreed charges (i.e. rates which have been set in response to competitive forces). Exhibit 29, opposite, shows the distribution of rail traffic by type of rate as a percent of total ton-miles and as a percent of total revenue for the years 1951, 1963, 1974 and 1976. By both measures the amount of traffic moving under competitive rates and agreed charges has steadily increased, going from 11% in 1951 to 52.5% in 1976 as a proportion of total ton-miles, and from 13% to 71.3% as a proportion of total revenue. Exhibit 30, overleaf, gives a breakdown by region of origin and destination of the percent of total revenue and ton-miles falling under the category of competitive rates and agreed charges in the years 1957, 1966, 1971 and 1972. On both a revenue and ton-mile basis, the highest percent of freight shipped under competitive rates in 1972 was from Eastern to Western Canada at 89.6% (revenue) and 92.5% (ton-miles). The matching figures for shipments within Eastern Canada were 80.8% and 76.6%.

Another measure of the intensity of competitive pressures on the railways is the rate of increase of rail rates. Figures reported by Scott (1978) show that in 1959, on average, railways earned 1.79¢ per ton-mile from their total traffic mix. With the implementation of the National transportation Act in 1967, average revenue per ton-mile fell steadily through 1971, at which time it was 1.36¢. By 1975 the railways' average revenue per ton-mile reached 1.80¢ per ton-mile, and rose again in 1976 to 2.17¢. Expressed in constant dollars, (1949 = 100), however, average revenue per ton-mile has dropped from 1.35¢ in 1959 to 0.67¢ in 1976. Exhibit 31 shows average

EXHIBIT 30COMPETITIVE RATES AND AGREED CHARGES AS % OF
TOTAL TRAFFIC REVENUES (R) AND TON-MILES (T)

REGION OF	1957		1966		1971		1972	
ORIGIN & DESTINATION	<u>R</u>	<u>T</u>	<u>R</u>	<u>T</u>	<u>R</u>	<u>T</u>	<u>R</u>	<u>T</u>
Maritimes to Maritimes	31.1	29.2	55.9	59.5	63.3	64.6	65.5	65.0
Maritimes to Eastern	30.9	28.9	54.4	51.5	70.0	78.9	82.2	76.6
Maritimes to Western	18.7	24.2	35.0	36.2	75.6	78.6	84.0	82.0
Eastern to Maritimes	20.0	12.1	45.9	35.3	62.4	61.2	63.3	58.4
Eastern to Eastern	44.8	46.7	73.4	72.3	80.2	78.9	80.8	76.6
Eastern to Western	53.6	58.1	67.2	72.1	87.1	91.0	89.6	92.5
Western to Maritimes	34.8	41.5	38.0	45.8	79.3	75.6	76.4	66.2
Western to Eastern	47.6	56.1	59.8	56.8	72.4	66.5	69.3	63.5
Western to Western	27.9	20.9	57.2	43.1	41.6	27.2	43.1	26.6

EXHIBIT 31

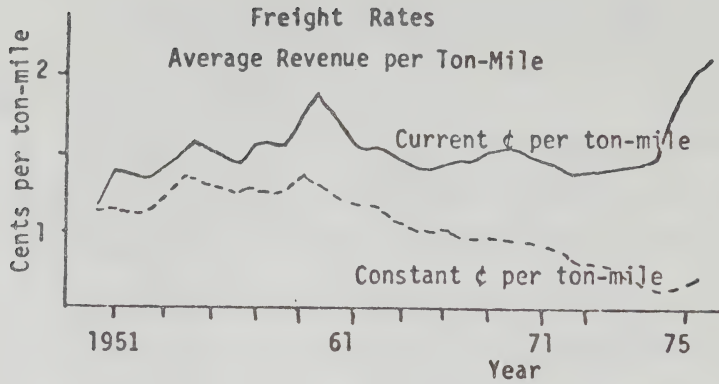


EXHIBIT 31a

REVENUE PER TON-MILE BY RATE CATEGORY,
1959, 1967, 1971 AND 1974

CATEGORY OF FREIGHT RATE	REVENUE PER TON-MILE (CENTS)				PERCENT OF 1959 LEVELS			
	1959	1967	1971	1974	1959	1967	1971	1974
Class Rated	4.59	4.03	4.35	4.33	100	88	95	94
Commodity, Non-competitive	1.95	1.52	1.20	1.17	100	78	62	60
Commodity, Competitive	2.77	2.65	2.07	2.20	100	96	75	79
Agreed Charges	2.37	1.87	1.90	2.33	100	79	80	98
Statutory Grain Rates	0.50	0.50	0.50	0.50	100	100	100	100
All Traffic	1.79	1.54	1.36	1.56	100	86	76	87

Source: Revenue per ton-mile obtained from Canadian Transport Commission, Waybill Analysis, 1959, 1967, 1971, and 1974, after Heaver and Nelson, Railway Pricing Under Commercial Freedom: The Canadian Experience, Centre for Transportation Studies, UBC, 1977.

EXHIBIT 32
COMMODITIES CARRIED BY RAIL

	1969		1977		Annual % Growth (Decline) in tons
	Short Tons	%	Short Tons	%	
Live Animals	214,373	0.1	102,838	*	(9.6)
Food, Feed, Beverages and Tobacco	28,408,105	13.6	35,841,335	13.1	2.9
Crude Materials, Inedible	103,318,717	49.5	142,318,443	52.1	4.1
Fabricated Materials, Inedible	62,907,600	30.1	70,838,202	26.1	1.5
End Products, Inedible	8,453,637	4.0	10,191,720	3.7	2.2
Special Types of Traffic (TOFC, COFC)	4,164,164	2.0	12,107,008	4.4	14.3
Non Carload Freight	1,475,105	0.7	1,143,615	0.4	(3.2)

Source: STATCAN 52.207, as cited by Wolff and Kuczer. The Future of the Truck and Rail Modes as Carriers of Freight in Canada, University of Toronto and York University Joint Program in Transportation, Research Report No. 63, August 1979.

revenue per ton-mile in current and constant dollars from 1951-1976.

Exhibit 31a shows, in current dollars, the average revenue per ton-mile for five rate categories over the period 1959-1974. With the exception of statutory grain rates, which were fixed, revenue in all rate categories declined. The biggest declines were in commodity rates, both competitive and non-competitive.

The drop in real average revenue should not be construed as totally a result of competitive pressures, as over this period the railways have experienced losses of higher revenue general cargo traffic to trucking, a rapid increase in the volumes of bulk commodities carried and significant increases in the productivity of bulk commodity carriage. These increases in productivity are reflected in the proportionally greater decline in commodity rates over 1959-1974.

Exhibit 32, opposite, highlights some of the changes in the composition of the commodity mix carried by the railways over the period 1969-1977. An increase in container traffic resulted in a large yearly growth of special traffic. The only other commodity group that kept pace with the rate of economic growth was Crude Materials. Tonnages of non-carload freight and live animals decreased, mainly due to truck competition (Wolff and Kuczer, 1979).

EXTENT AND INFLUENCE OF INTERMODAL COMPETITION - ONTARIO

Two studies by the Ontario Ministry of Transportation and Communications (1975, 1978) provide data on the use of the various transport modes by firms in 20 industrial categories (SIC 20-SIC 39) and on complaints by firms about the rates and service provided by each mode. The 1975 study involved a sample of 150 firms, while the 1978 study had a larger sample of 468 firms. Exhibit 33

EXHIBIT 33

TRANSPORT MODES USED: BY GEOGRAPHICAL REGION

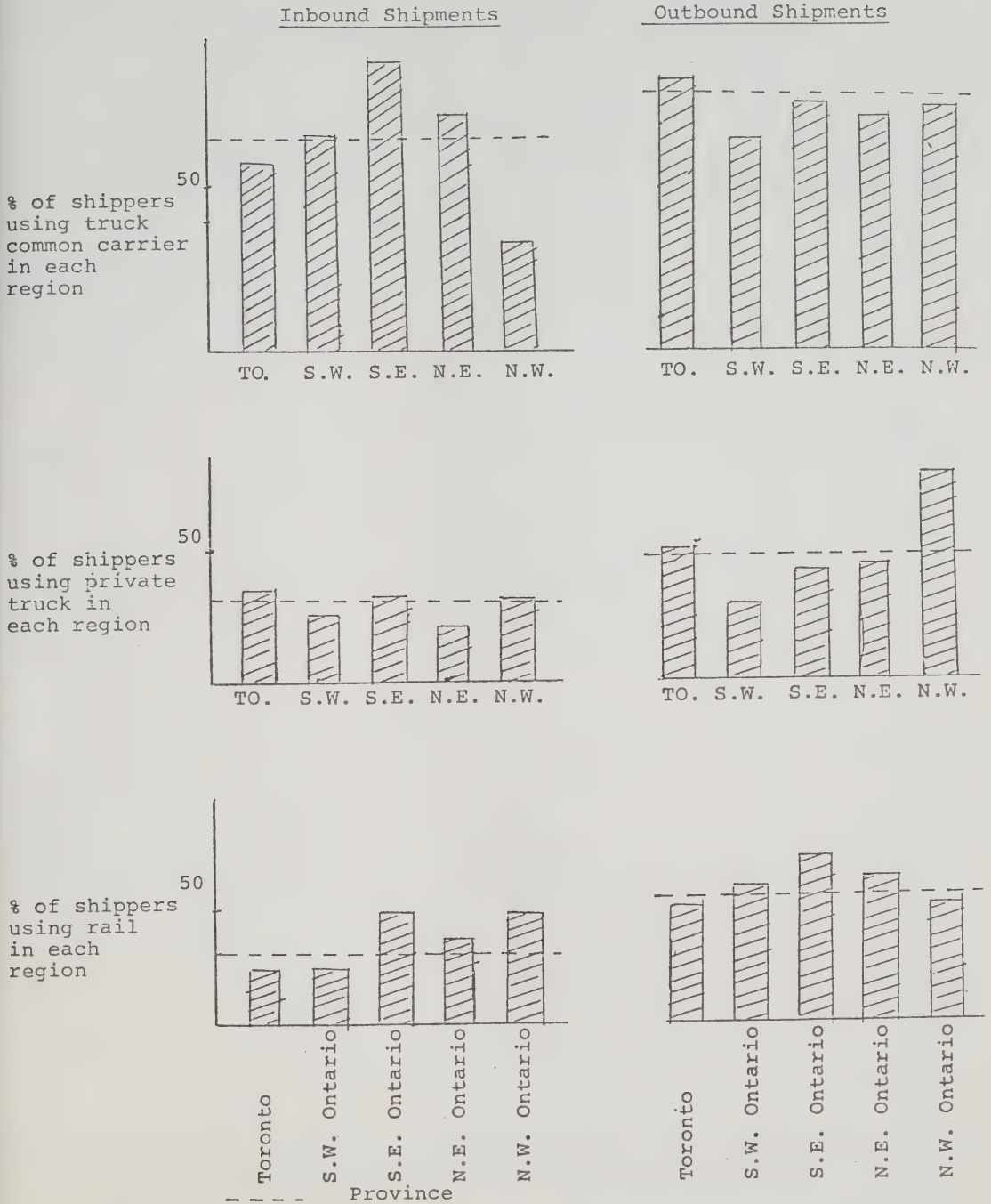
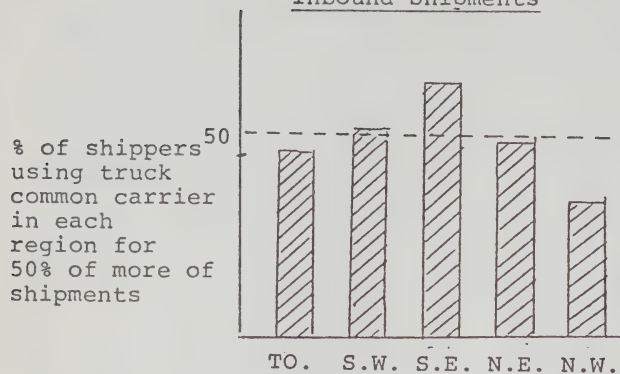
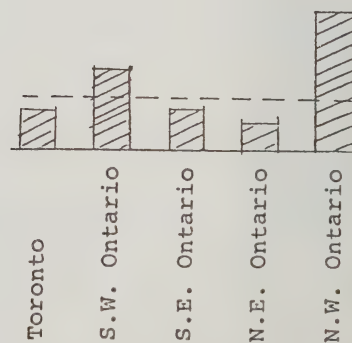
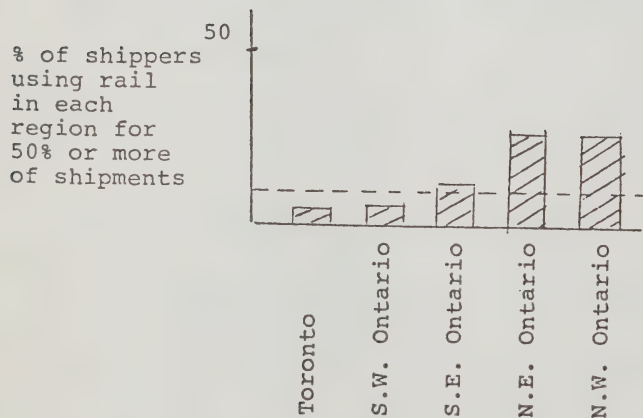
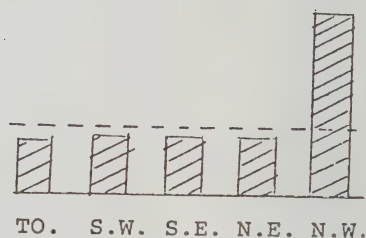
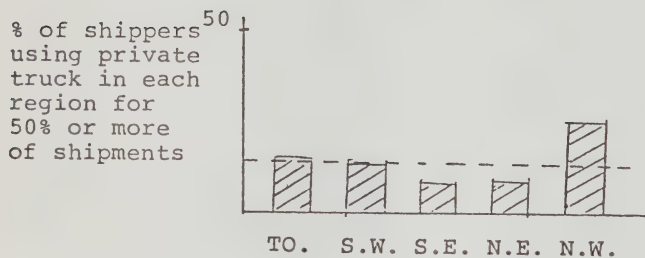
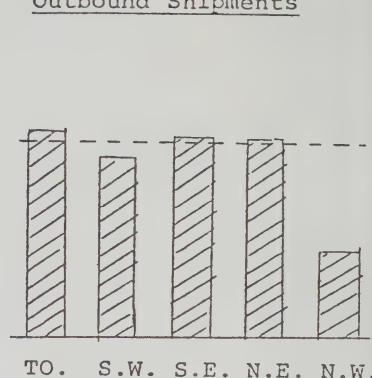


EXHIBIT 33 (cont'd)

TRANSPORT MODES USED: BY GEOGRAPHICAL REGIONInbound ShipmentsOutbound Shipments

Source: Ontario Ministry of Transportation and Communications, Truck Transportation in the Province of Ontario: Phase 2 - Survey of Shippers, October, 1975

EXHIBIT 3A

PERCENT OF WEIGHT CARRIED BY VARIOUS TRANSPORT MODES
(PROVINCE)

Mode % of weight Carried	Common Carriers (Truck)		Private Carriers (Truck)		Rail	
	Inbound	Outbound	Inbound	Outbound	Inbound	Outbound
	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)
None	29 (19.3)	24 (16.0)	105 (70.0)	94 (56.0)	92 (61.3)	82 (54.7)
1 - 49 %	16 (10.7)	39 (26.0)	20 (13.3)	29 (19.3)	20 (13.3)	38 (25.4)
50 - 100 %	84 (56.0)	79 (52.7)	17 (11.3)	29 (19.3)	15 (10.0)	22 (14.6)
N.A.	21 (14.0)	8 (5.3)	8 (5.3)	8 (5.3)	23 (15.4)	8 (5.3)
Total	150 (100.0)	150 (100.0)	150 (100.0)	150 (100.0)	150 (100.0)	150 (100.0)

N.A. - data not available

Source: Ontario Ministry of Transportation and Communications, Truck Transportation in the Province of Ontario: Phase 2 - Survey of Shippers, October, 1975.

taken from the 1975 study, shows the extent to which firms in 5 regions of the province use truck common carrier, private truck and rail for their inbound and outbound shipments. The fact which stands out most of all from these figures is the relatively heavy reliance of shippers in northwestern Ontario on private truck and rail for inbound and outbound shipments.

Exhibit 34, opposite, shows the percent of weight carried by the three transport modes on a province-wide basis. Truck common carrier is the mode used by most shippers who ship 50-100% of their freight by one mode. Rail is used least by shippers in this category.

Exhibit 35 shows the number of shippers in the sample who use modes other than truck (private or common carrier) or rail.

Exhibit 36, taken from the 1978 study, illustrates shipper complaints by mode and region of the Province. Taking the results from the Province as a whole, complaints about rail rates and service appear slightly higher than complaints about truck rates and service (6% vs. 4% on rates, 16% vs. 11% on service). On a regional basis, northwestern Ontario shippers appear to complain most frequently about rail rates and service. Exhibit 33 shows that shippers in this region are also the heaviest users of rail.

The report by McLaughlin (1978), which was cited in the section on intra-railway competition, gives some insight into the extent of potential intermodal competition in the mining and forestry sectors of the Ontario economy. McLaughlin emphasizes that the questionnaire responses which the report summarizes are highly subjective and thus should not be taken to necessarily represent a true picture of rates and service offered by the various

EXHIBIT 35

OTHER MODES OF TRANSPORT USED*

<u>Mode</u>	<u>No. of Firms</u>	
	<u>Outbound</u>	<u>Inbound</u>
Parcel Post	10	-
Air	6	1
Water	2	4
Piggyback	3	-
Forwarders	6	1
Pipeline	1	-

*Strictly speaking, only air, water, pipeline can be regarded as "other modes".

Source: Ontario Ministry of Transportation and Communications, Truck Transportation in the Province of Ontario: Phase 2 - Survey of Shippers, October, 1975.

EXHIBIT 36

COMPLAINTS BY MODE AND REGION

	CENTRAL		SOUTHWESTERN		EASTERN		NORTHEASTERN		NORTHWESTERN		ONTARIO	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
	Firms	Users	Firms	Users	Firms	Users	Firms	Users	Firms	Users	Firms	Users
TRUCK USERS	287	100	86	100	54	100	14	100	14	100	455	
Complaint - Rates	8	3	3	3	4	7	1	7	2	14	18	4
- Service	32	11	9	10	3	6	1	7	3	21	48	11
- Damage	13	5	1	1			1	7			15	3
- Customs	3	1	2	2							5	1
- Captivity												
TOTAL	56	20	15	17	7	13	3	21	5	36	86	19
RAIL USERS	142	100	30	100	27	100	10	100	7	100	216	
Complaint - Rates	5	4			3	11	1	10	4	58	13	6
- Service	18	13	8	27	5	19	1	10	2	29	34	16
- Damage	4	3			1	4					5	2
- Customs												
- Captivity	2	1									2	1
TOTAL	29	20	8	27	9	33	2	20	6	86	54	25
POSTAL USERS	27	100	5	100	7	100	1	100	2		42	
Complaint - Rates	1	4									1	2
- Service	15	56	4	80	1	14	1	100			21	50
- Damage	2	7									2	5
- Customs												
- Captivity												
TOTAL	18	67	4	80	1	14	1	100			24	57

	CENTRAL		SOUTHWESTERN		EASTERN		NORTHEASTERN		NORTHWESTERN		ONTARIO	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
	Firms	Users	Firms	Users	Firms	Users	Firms	Users	Firms	Users	Firms	Users
AIR USERS	67		7		9		-		3		86	
Complaint - Rates	1	1									1	1
- Service	6	9	1	14					1	33	8	9
- Damage												
- Customs												
- Captivity												
TOTAL	7	10	1	14					1	33	9	10
EXPRESS	27		8		10		-		1		46	
Complaint - Rates	1	4									1	2
- Service	6	22	1	13	3	30					10	22
- Damage	1	4									1	2
- Customs												
- Captivity												
TOTAL	8	30	1	13	3	30	-		-		12	26
INTERMODAL	41		5		6						52	
Complaint - Rates												
- Service					1	17					1	2
- Damage												
- Customs	1	2									1	2
- Captivity												
TOTAL	1	2			1	17					2	4

Source: Ontario Ministry of Transportation and Communications,
Industrial Transportation Requirements Study, March, 1978.

EXHIBIT 37RANKING OF TRANSPORT PRICES AND SERVICE CHARACTERISTICS
BY SHIPPERS IN ONTARIO MINE AND FORESTRY INDUSTRIES

	<u>% of Respondents</u>		
	<u>All Modes</u>	<u>Rail</u>	<u>Truck</u>
<u>Price Is</u>			
Impediment to Sales	18.2	21.6	11.4
Too High	32.5	46.0	20.0
Fair	49.3	32.4	68.6
<u>Reliability Is</u>			
Unsatisfactory	8.8	13.5	0.0
Poor	22.5	37.8	10.3
Good	68.7	46.6	89.7
<u>Quality Is</u>			
Unsatisfactory	2.6	0.0	0.0
Poor	16.9	31.4	5.4
Good	80.5	68.6	94.6

p.36 and pp.40-41

Source: McLaughlin, G.M., The Bulk Freight Shipper's Point of View:
A Survey on Transportation, CTC Report No. 30-78-05, 1978

modes or the degree of competition between them.

In Ontario, 18% of the survey respondents were physically captive to one carrier, although 40% of the shippers perceived themselves as being captive. This perceived captivity may have been the result of there being only one carrier with acceptable quality of service or rate. 13% of the shippers had access to more than one mode.

Of the 40% who perceived themselves as being captive to one carrier, 50% had physical access to more than one mode, 11.1% had access to one mode but more than one carrier, while 38.9% had access to only one carrier. Of the 60% who perceived themselves as being non-captive, 81.5% had physical access to more than one mode, 14.8% had access to one mode but more than one carrier, while 3.7% had access to only one carrier. Exhibits 13 and 14 showed the shippers' perceptions of service quality and price competition in Ontario. In both cases, rail-rail competition is perceived to be much weaker than either truck-truck competition or rail-truck competition. Exhibit 37, opposite, shows how the shippers ranked rail and truck on the characteristics of price, reliability and quality. For all three characteristics, rail is ranked as less satisfactory than truck. The report does not distinguish the rankings of shippers who perceived themselves as being captive to one mode from those with access to more than one mode. This information could be obtained, however, by further analysis of the original questionnaire responses.

A report by IBI Group (1977) focussed on transportation issues in northern Ontario. Exhibits 38 and 39, which are taken from this report, illustrate the rail network in northern Ontario and show those communities which

NORTHERN ONTARIO
Rail Network

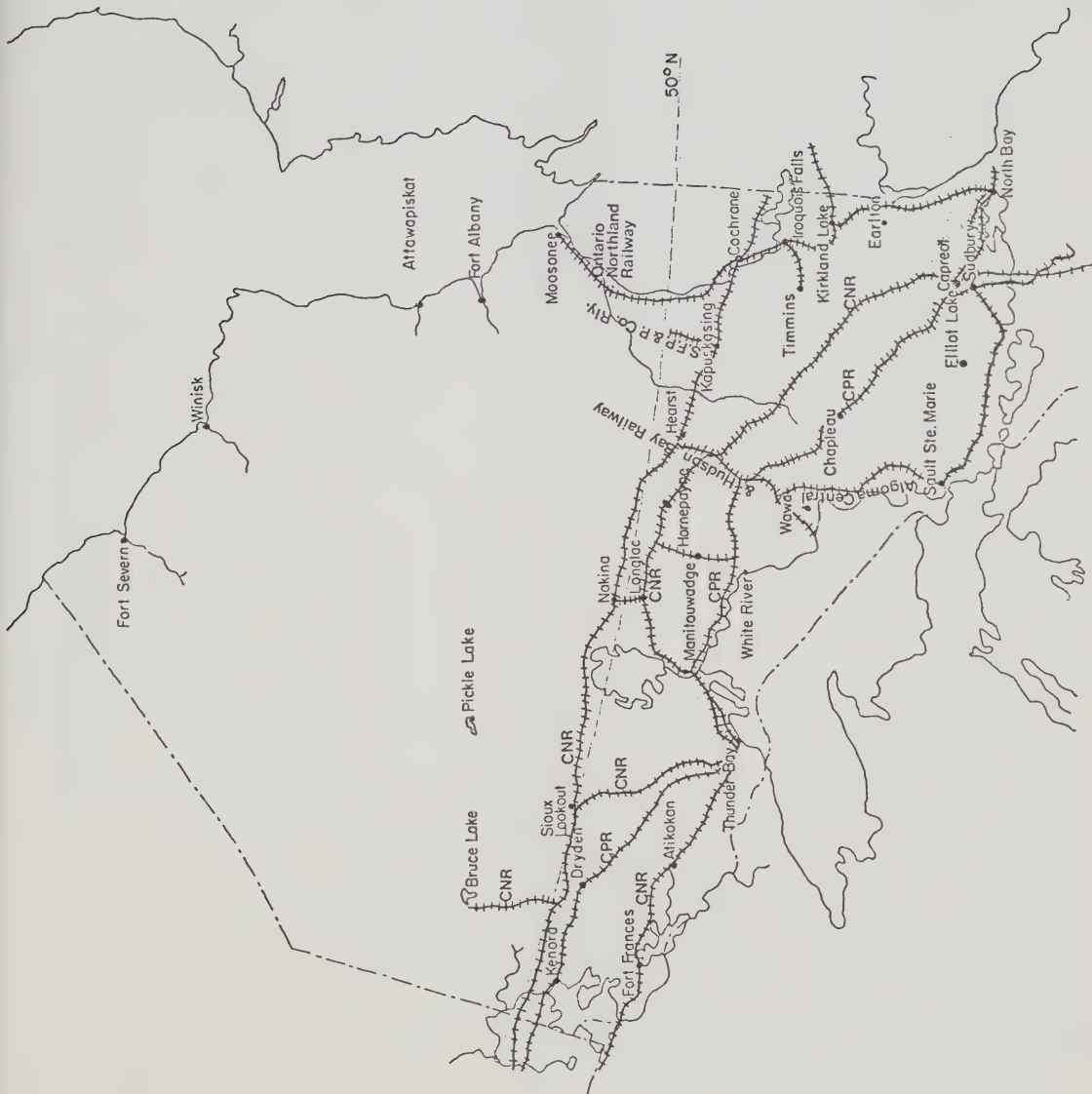
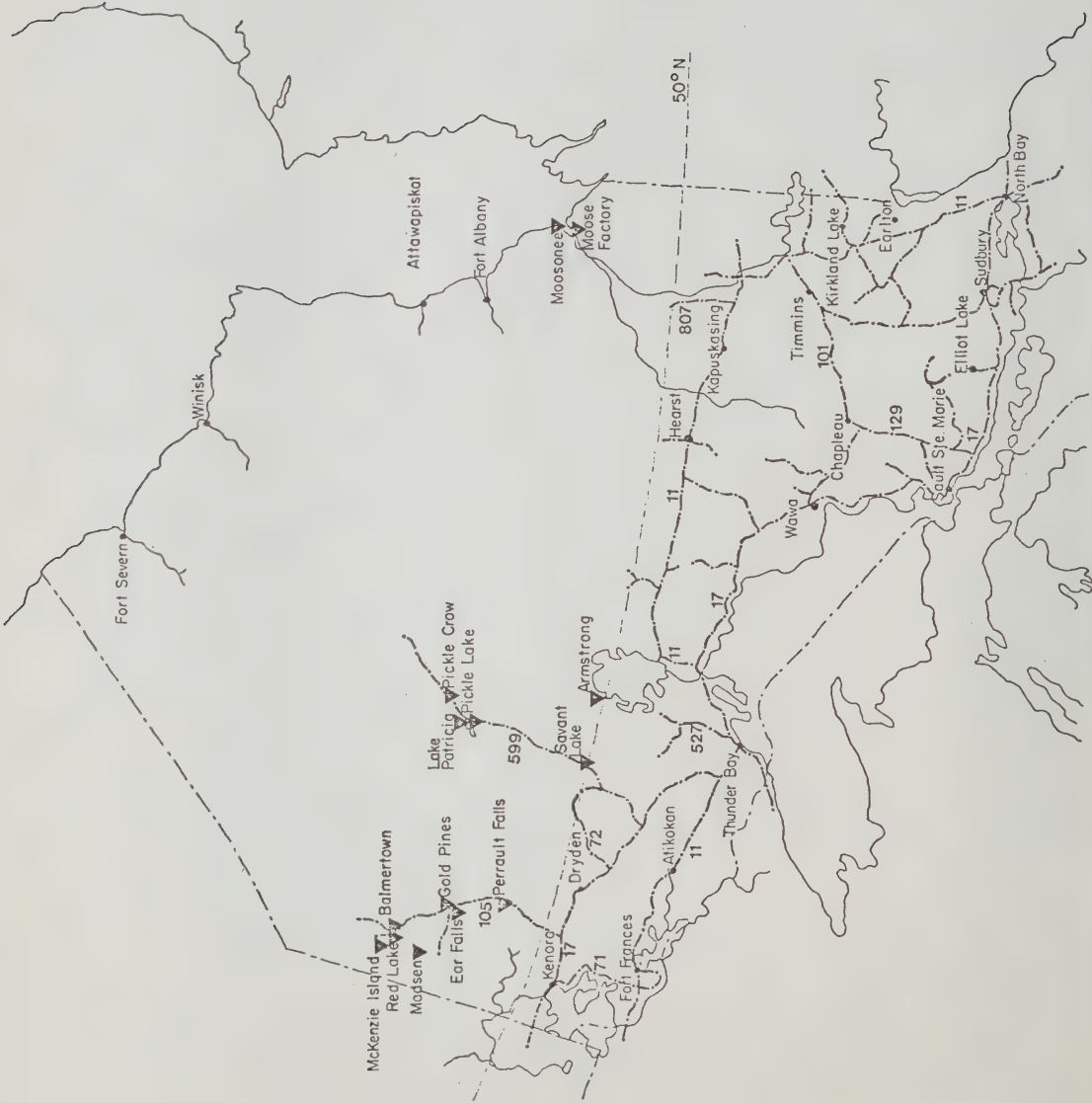


EXHIBIT 39

NORTHERN ONTARIO
Points Served by Truck

▼ Communities North of 50°N
Served by "For Hire" Trucks



are served by "for-hire" trucking. Exhibit 20 in Chapter III gives a more detailed picture of the transportation services available in communities north of Latitude 50⁰N. The two figures and the table show that there are many communities which are served by only one freight transport mode. Not only is there thus a lack of direct intermodal competition in this area, but there is also a lack of intramodal competition since few routes are served by more than one trucking company and no community is served by more than one rail carrier. While there are no data which show directly the impact of direct competition, the IBI report described the perceptions of northerners in this way:

"Many people in northern Ontario feel that they are dependent upon rail transportation and that the railway companies are taking unfair advantage of their position. For example, many rates are based on the distance hauled by the carrier which may be rather circuitous rather than reflecting "point-to-point" distances as is the case for areas with denser railway networks. Another complaint is that some types of railway services are not available, such as general merchandise boxcar rates and pool car and pool truck services. This tends to hurt low volume shippers in northern Ontario.

"The lumber industry has identified two specific problems with regard to rail rates. Firstly, the transcontinental rates from west to east are less than those for comparable hauls from east to west. Secondly, secondary timber products such as particle board are treated as lumber although they are not as valuable and should attract a lower rate. The railways' response is that for some movements they have to meet competitive market situations that if their rates were not lower for western lumber this western lumber would not be sold and would not be shipped."

RATE APPEAL PROCEDURES

There are two avenues through which shippers can appeal railway rates. Shippers who are captive to rail, and thus who do not benefit from actual inter-modal competition, can apply to the Canadian Transport Commission under Section 278(1) of the Railway Act, which states:

"278.(1) A shipper of goods for which in respect of those goods there is no alternative, effective and competitive service by a common carrier other than a rail carrier or carriers or a combination of rail carriers may, if he is dissatisfied with the rate applicable to the carriage of those goods after negotiation with a rail carrier for an adjustment of the rate, apply to the Commission to have the probable range within which a fixed rate for the carriage of the goods would fall determined by the Commission; and the Commission shall inform the shipper of the range within which a fixed rate for the carriage of the goods would probably fall."

Section 23 of the National Transportation Act replaced Section 317 of the Railway Act which had enabled shippers to appeal rail rates on the grounds of unjust discrimination. Section 23 requires shippers to demonstrate a *prima facie* case of injury to the public interest before a consideration of redress can be obtained from the CTC. The Act does not limit the definition of the public interest, nor is Section 23 limited to rates, but also applies to any act or omission of a carrier.

Section 23 is apparently the most likely route for shipper appeals. Since the enactment of the National Transportation Act in 1967, the Canadian Transport Commission has decided only five Section 23 cases. With the exception of the Anglo-Canadian case, all were decided in favour of the applicant. A further nine formal applications which were made during this time were discontinued prior to a hearing. The Anglo-Canadian case concerned all newsprint producers in Canada and thus involved major manufacturing interests in Ontario.

EXHIBIT 40

SECTION 23 CASES DECIDED BY
THE CANADIAN TRANSPORT COMMISSION
1967-1980

	<u>Applicant</u>	<u>Date of Initial Application</u>	<u>Date of CTC Decision</u>
1.	Anglo-Canadian Pulp and Paper Mills Limited et al*	May 7, 1970	March 25, 1977
2.	Saskatchewan Wheat Pool et al (the Rapeseed Case)	October 14, 1970	June 27, 1973
3.	Bateaux St. Maurice Inc.	May 24, 1977	September 22, 1977
4.	B.C. Forest Products Limited et al (the Disparities Case)**	August 23, 1977	August 17, 1979
5.	Columbia Containers Limited	March 13, 1978	October 24, 1978

SECTION 23 CASES DISCONTINUED BY THE APPLICANT
1967-1980

	<u>Applicant</u>	<u>Date of Initial Application</u>	<u>Date of Discontinuation</u>
1.	Prince Albert Pulp Co. Limited	August 24, 1970	February 21, 1975
2.	Kootenay - Columbia Timber Co.	April 6, 1971	January, 1975
3.	Asbestos Eastern Transport Inc.	September 27, 1971	November 26, 1971
4.	Neptune Terminals Limited	July 27, 1972	August, 1972
5.	Cansulex	March 26, 1976	November 11, 1977
6.	McIntyre Mines Limited	May 3, 1976	December 27, 1978
7.	Canadian Cellulose Co. Limited	August 26, 1976	April, 1978
8.	Robert Richer Inc.	June 22, 1977	July 29, 1977
9.	Quebec Lumber Manufacturers Association	December 27, 1978	February 1, 1979

* Often referred to as "The Newsprint Case" this Section 23 application involved all newsprint producers in Canada.

** The decision in this case has been appealed in a federal court. A companion Section 23 application, The Incentives Case, which involves railway incentive rates has not been heard pending the final outcome of the Disparities Case. The Incentives Case involves pulp and paper producers across Canada, while the Disparities Case involves only Western producers.

A companion case to B.C. Forest Products et al, which is still pending, also involves the pulp and paper companies in Ontario. Of the nine discontinued applications, none involved Ontario interests directly, although Ontario did intervene in the McIntyre Mines application. Exhibit 40 lists the applications heard or discontinued. In addition to the formal applications there have been hundreds of informal ones which have subsequently been resolved in some way between the shipper and carrier without initiation of formal proceedings.

There has been only one case in which a shipper, Domtar Limited, has applied to the CTC under the provisions of the maximum rate section (Section 278). The application was withdrawn, as the rate issue was resolved commercially.

This record of cases has led Heaver and Nelson (1980) to conclude that:

"... the various types of competition and rate negotiation appear adequate for setting most railway rates at competitive and economic levels, and for settling most rate issues between shippers and the railways. Even the discouragement of the regulatory costs and delay associated with a Section 23 case would not have made the record of cases so sparse if there had been significant difficulty in reaching rate accords between shippers and railways."

Nonetheless, there is still wide support among shippers for revisions to both Section 278 and Section 23. Some groups criticize the maximum rate standard for fixed rates and the definition of a "captive shipper" as not affording them sufficient protection from excessive rates when they have no reasonable alternative mode of transport available. Also, there have been many complaints that the regulatory procedures for appeals under the two sections are "too cumbersome, slow, costly, and uncertain of results" (Heaver and Nelson, 1977).

Possibly in response to this criticism the CTC, in 1978-1979, made it easier for shippers to establish a *prima facie* case for an investigation and decision. Despite the changes, shippers, carriers and representatives of provincial and federal governments are still expressing dissatisfaction with the slow and costly nature of the proceedings. At a recent annual meeting of the Canadian Industrial Traffic League CP Rail proposed an arbitration procedure, though there was apparently no consensus among the various parties as to the desirability of such a procedure in place of the current Section 23 requirements.

The recent CTC analysis cited earlier concluded, however, that proposals to place a time limit on rate appeal procedures and to institute rate arbitration:

- "a) would have little or no effect on railway efficiency, productivity, service adequacy or economic viability; and,
- b) would be perceived by the shipping community to be an initiative that would increase shipper protection. However, there is little to support this perception in terms of likely decreasing the time of a formal rate appeal procedure beyond that decrease which would occur in any event due to more numerous precedents and the actions of the regulatory body under current policy guidelines. Nor is it likely that the arbitration procedure, once details are defined, would be faster or more acceptable in practice than the current regulatory protection clauses."

SUMMARY

There appears to be little objective analysis of the extent to which the lack of effective intermodal competition leads to higher rates or worse service for shippers. The reports reviewed do show, however, that some shippers perceive the absence of competition to result in their being charged higher rates and/or receiving poorer service than would be the case in a competitive situation.

Further studies would be required to determine the validity of these views.

The 1975 MTC study showed that there is heavy use of truck (common carrier and private) and rail by shippers in the industrial categories surveyed. Common carrier trucking is used most of all. Rail and private truck carriers are used relatively equally, though the distribution of their use varies.

Shippers in northwestern Ontario rely most heavily on rail and private truck and registered the most frequent complaints about rail rates and service.

Shippers generally perceive the need for improved rate appeal procedures to make the appeal process more accessible. There does not appear to be any consensus, however, as to the type of changes that would be effective.

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EVALUATION OF POLICY OPTIONS

POLICY OPTION	OBJECTIVE	ADVANTAGES	DISADVANTAGES
1. Government Ownership of Railway Track and Rights-of-Way	- to assist railways in remaining economically solvent	- potentially introduces more competition to railway services - allows broader based decision-making	- involves government in many detailed decisions - negates trade-offs between investment and operational costs
2. Rate Regulation	- to ensure fairness to all rail users	- independent assessment of rates	- potential growth of litigation - probable reduction of railway profitability
3. Improved Rate Appeal Procedures	- to enable captive shippers to appeal effectively railway rate proposals	- independent assessment of rates when shipper is captive	- reduction in railway profitability
4. Government Subsidy for Transportation to Inadequately Served Areas	- to ensure the provision of good transportation services to all areas	- equity between various areas	- high costs - assistance to all users whether needed or not
5. Provincial Branch Line Program	- to maintain rail service in cases of social or economic desirability	- broader decision-making	- high cost - government involvement in a new area
6. Provincial Position on Branch Lines	- to present the Provincial position in CTC abandonment hearings	- present social and economic implications of abandonments	- possibly ineffective
7. Land Banking of Railway Rights-of-Way	- to maintain integrity of rail rights-of-way	- possible multiple uses of rights-of-way - compatibility with other Provincial policies	- in most cases eventually decisions have to be made on retention
8. Short Line Railways	- to maintain branch line services	- maintain service, but with private investment and operation	- concept not proved
9. Government Provision of Risk Capital	- to ensure that railways have funds for desirable investments	- relatively low risks	- Canadian railways can already obtain most capital requirements themselves
10. Passenger Service Pricing	- to maintain financial viability of bus carriers	- no direct government intervention	- increased rail fares for consumers
11. Promotion of Intra-Rail Competition	- to encourage more competition between railways	- improves services and rates to some shippers without direct government intervention	- may impact on financial viability of railways

COMPETITION IN FREIGHT TRANSPORT
IN ONTARIO:
PRESENT AND POTENTIAL INDUSTRIAL USES
OF
RAIL SERVICES

INDUSTRY SECTOR POLICY BRANCH
MINISTRY OF INDUSTRY AND TOURISM
JUNE 30, 1980

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INTRODUCTION

The purpose of this paper is to describe the characteristics of the industrial uses of rail service, the potential for increased use and the factors which dictate the continued use of rail or a switch to another mode.

From its infancy in the early 1940s, the trucking mode has grown rapidly to become a major freight carrier in Canada. Much of their growth was at the expense of the rail mode, although the table below would indicate that the share of transportation operating revenues earned by the trucking mode is beginning to stabilize.

MODAL SHARE OF FREIGHT OPERATING REVENUES

	1960 %	1965 %	1970 %	1975 %
Air	0.6	1.0	1.6	2.1
Pipeline	5.1	5.9	5.8	5.3
For-Hire Truck*	13.6	28.7	42.4	42.9
Rail	56.3	52.7	40.3	37.6
Water	24.4	11.7	9.9	12.1
	100.0	100.0	100.0	100.0

Sources: STATCAN 55-201, 52-206, 54-205, 51-206, 53-222 and For-Hire Trucking Survey.

* Excludes Private Trucking

During the sixties, the truck mode grew rapidly, especially after the completion of the Trans Canada Highway in 1962. The volume of freight moved by truck increased by 130 per cent during the period 1960 to 1970, when it reached 35.8 billion ton-miles. Simultaneously, the net capital stock invested in highways grew by 111 per cent to the level of \$10.6 billion by 1970. (Transport Canada, 1975)

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In some markets, for-hire trucking competes effectively with the rail mode. In other markets, the truck mode has evolved as a dominant carrier and the railways' cost structure precludes direct competition. The rapid growth of the trucking mode has proven to be an issue of confusion to many rail operators and to a lesser extent to many economic forecasters. The traditionalists hold the belief that trucks cannot compete with rail over long distance or in the movement of bulk commodities. While this may be true on simple economic terms, it does not explain why many shippers use truck exclusively for many long distance hauls, even though the ton-mile charges may be two to three times that of rail. This seemingly 'irrational' decision on the part of the shipper is based mainly on the fact that the truck mode provides better service than the rail mode. Thus, the shipper is able to minimize his total cost of distribution by using the more 'expensive' truck mode. This issue is merely one of a number of issues that have caused problems for transportation planners and policy makers.

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RAIL USE BY ONTARIO INDUSTRIES

The requirement for rail services in industry is of particular importance when the movement of bulk loads, large equipment and dangerous products are called for. Types of companies presently moving such products are:

- aerospace - major component builders
- automotive - car assembly plants
- agriculture - livestock, grain, chemicals
- boatbuilding - large vessels and moulds
- chemicals - bulk and dangerous products
- electrical - large transformers
- housing - bulk movement of lumber, bricks and cement, etc.
- machinery - large and/or heavy equipment
- mining - heavy equipment and ores
- nuclear- radioactive materials
- shipbuilding - large fabricated systems
- steel - bulk shipments
- etc.

In addition to the above listings, it is reasonable to state that all low value products with large volume bulk requirements can best be shipped by rail.

It should be noted that a freight train with maximum load can carry up to 200 tons a mile on a gallon of fuel. A large tractor trailer road vehicle can carry up to 70 tons a mile on a gallon of fuel. (The most economical means of transport is a large lake ship which can carry from 600 to 1000 tons per mile/gallon.)

ONTARIO INDUSTRIES USING RAIL
FOR THE
TRANSPORTATION OF THEIR PRODUCTS

TYPE OF INDUSTRY	NO. OF FIRMS SURVEYED	LOCATION OF SURVEYED INDUSTRIES					SHARE OF SURVEYED INDUSTRIES USING RAIL
		CENTRAL	SOUTH- WESTERN	EASTERN	NORTH- WESTERN	NORTH- WESTERN	
Food and Beverage	28	16	7	3	2	-	9 used truck and rail exclusively
Tobacco Products	2	1	1	-	-	-	Central firm shipped 20% by piggyback. Other firm also used rail.
Textile Industry	12	7	-	4	1	-	6 used rail, mainly for outbound ship- ments.
Clothing Industry	11	5	4	2	-	-	Exclusive truck and rail only in S.W. region. Some rail services in Central.
Wood Industry	20	3	5	3	7	2	17 firms used truck and rail exclusively. Greatest rail use in the north, especially N.W. because of dis- tance.
Furniture Industry	31	21	8	1	-	1	Exclusive use of truck and rail by 4 S.W. and 12 Central firms. 3 Central firms used piggyback outbound.

TYPE OF INDUSTRY	NO. OF FIRMS SURVEYED	LOCATION OF SURVEYED INDUSTRIES						SHARE OF SURVEYED INDUSTRIES USING RAIL
		CENTRAL	SOUTH-		NORTH-		WESTERN	
		7	1	3	1	1		
Paper & Allied Products	13						60% for material acquisition. 6 used truck and rail exclusively. Largest users of rail were the two northern firms.	
Printing & Publishing	12	7	5	-	-	-	7 used rail. 5 used truck and rail exclusively, only one of which was found in S.W.	
Chemical Industry	28	19	5	4	-	-	20 firms used truck and rail exclusively.	
Petroleum & Coal	4	3	-	1	-	-	All firms used rail to some extent; most inbound shipments in liquid state and bulk form.	
Rubber & Plastics	28	23	3	2	-	-	1/3 of firms acquired materials by rail. 1/3 of Central, S.W. and all Eastern firms used rail for product distribution.	
Leather Industry	6	3	-	3	-	-	Rail associated with express and pool car movements and no indication of carload movements.	

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TYPE OF INDUSTRY	NO. OF FIRMS SURVEYED	LOCATION OF SURVEYED INDUSTRIES						SHARE OF SURVEYED INDUSTRIES USING RAIL
		CENTRAL	SOUTH- WESTERN		EASTERN	NORTH- WESTERN		
Non-Metallic Minerals (e.g., concrete, glass, ceramics)	18	13	3	2	-	1	13 firms used rail. 70% of them used rail for material acquisi- tion and 40% for pro- duct distribution.	
Primary Metals (e.g., tube/wire/ plate, castings)	14	4	5	4	1	-	Rail used by 80% of Central and 75% of Eastern firms. One Eastern and two Central firms used rail and truck exclu- sively.	
Metal Fabricating	75	50	11	11	-	3	Use of rail for mat- erial acquisition was minimal except for Eastern region. Both Central and Eastern used rail for product distribution.	
Machinery Industry	71	45	13	8	4	1	Fewer firms used rail for material acquisi- tion than product distribution reflect- ing tendency of steel suppliers to deliver materials with own vehicles and also tendency for wider distribution of pro- ducts. Only 1 firm from each S.W. and N.W. regions who used truck and rail exclu- sively, and also 9 from Central.	

TYPE OF INDUSTRY	NO. OF FIRMS SURVEYED	LOCATION OF SURVEYED INDUSTRIES						SHARE OF SURVEYED INDUSTRIES USING RAIL
		SOUTH-		NORTH-				
		CENTRAL	WESTERN	EASTERN	WESTERN	EASTERN	WESTERN	
Electrical Products	54	37	9	8	-	-	-	13% used rail for material acquisition and 1/3 for product distribution. 7 firms used truck and rail exclusively, 5 in Central, 2 in Eastern.
Transportation Equipment	22	12	5	2	-	-	3	Truck mode was dominant, only 19% of firms used rail; greatest users of rail were vehicle mfrs. for product distribution.
Scientific & Technical Equipment	8	4	-	4	-	-	-	1/3 of firms used rail transport for both inbound and outbound movement. Rail users tended to be the larger firms.
Miscellaneous Manufacturing (e.g. toys and games, jewellery, brushes)	10	9	-	1	-	-	-	Rail use in this group was lowest of all the sectors. Jewellery manufacturers are non-users of rail.

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Source: MTC Industrial Transportation Requirements Study, 1978.

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Most major industries that require bulk deliveries of raw materials or that ship dangerous bulk or heavy loads presently operate a rail shipping dock.

Industry tends to use the means of transportation that is most convenient or economical to meet their particular requirement. With the exception of the larger industries, few companies have their own rail terminal tie line. In the small to medium size plants the trend is towards truck transportation. Only when industry has a requirement to move heavy or bulk cargo do they find it advantageous to pay a rental fee to the railway companies for a rail shipping terminal.

With the larger companies the use of rail is determined from project to project. In discussion with a number of the larger companies re their transportation needs, the following applies:

1. McDonnell Douglas Canada Limited
Airport Road, Malton

This company has its own rail terminal which is used to ship the major components and assemblies from the plant. These components include all major wing units for the DC-9 and DC-10 series of aircraft. Because of the high precision of these assemblies, special rail cars have been built to carry them. Precautions are taken enroute to monitor the degree of vibration and shock that is applied to the cars' suspension system. A special vibration timer is carried in each wing box to monitor where and when excess vibration has been applied. Some wings have been damaged enroute

during transfer operations. The company receives large components by rail, however, the major proportion of their raw materials, sub-assemblies and tools arrive at the plant by road.

This company first considered shipping their wing units by air using a "super guppy" transport. However, this was dropped in favour of rail because of the lower cost.

2. The de Havilland Aircraft of Canada
Downsview Airport, Toronto

This company uses road transportation for all shipping and receiving. They find it more convenient to ship by this method. They have control over their product from the factory to the customer. They ship all spare parts by road or by air depending on the customer's location and delivery requirements. Large aircraft spares and equipment for overseas locations generally go by ship container.

3. John T. Hepburn Ltd.
Malton, Ontario

This company is a major user of rail. They operate their own terminal and ship large steel assemblies on rail flat cars to their North American customers and to seaports for overseas projects. The company also receives a large percentage of their steel and heavy equipment by rail.

Products and materials that are not excessively heavy are shipped and received by road transportation. Shipping by road allows the product to be carried directly to the job site without the expense of a transfer cost.

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4. Collingwood Shipyards
Division of Canadian Shipbuilding and Engineering Ltd.
Collingwood, Ontario

This company buys the major portion of its shipbuilding steel from the Steel Company of Canada Ltd. in Hamilton. This steel is generally delivered to the shipyard by rail. The company always uses a means of transportation that is suitable and economical to meet their needs. As shipbuilders they do not experience the same delivery problems as other industries.

5. Fleet Manufacturing Ltd.
Fort Erie, Ontario

This company finds road vehicles to be their most economical mode of transportation. Products are high precision parts for the aerospace industry that must be handled with the utmost care.

6. Litton Systems Canada Ltd.
Rexdale, Ontario

High quality products for the aerospace industry are produced at this plant. They prefer to ship these by road and air freight. They do not consider rail at this time, however, if they were producing commercial products they would ship by the most economical system of transportation available.

Most small to medium size manufacturing companies use road transportation methods. They find it more convenient to ship direct by this method. They are also able to maintain control of their product while in transit.

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It is generally easier to meet the load requirements of a truck as compared to rail car load weight factors. Industry suggests that their products are safer on a truck and receive faster delivery than they have experienced by rail. In larger load shipments where cost is a major factor, rail transportation is preferred.

Shipment of products using container systems is now being used by exporting companies. By this process the container generally leaves the plant by road, transfers to rail and then to ship. Shipping by container is growing throughout North America and Europe. This process in the long term will complement the use of rail transportation in Canada.

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POTENTIAL FOR INCREASED USE OF RAIL MODE BY ONTARIO INDUSTRY

A study of shippers in the Province of Ontario in 1975 established that the majority with over 1,000 employees were rail oriented. They used rail to transport 50 per cent or more of the weight of both their inbound and outbound shipments. Shippers faced with long distance hauls used more rail as well. In the category of shippers with over 1,000 employees, 30 per cent were rail oriented while only 6 per cent of shippers with 100 employees or less used rail as their main mode of transportation. It seems reasonable that large shippers are rail oriented due to the large volume of shipment involved, the distance of markets, and the type of commodity being shipped.

In TABLE 1 we have a numerical breakdown of the type of commodities carried by rail in Canada during 1977.

TABLE 1
COMMODITIES CARRIED BY RAIL IN CANADA, 1977

	SHORT TONS	PER CENT OF TOTAL
Live Animals	102,838	*
Food, Feed, Beverages and Tobacco	35,841,335	13.1
Crude Material, Inedible	142,318,443	52.3
Fabricated Materials, Inedible	70,838,202	26.1
End Products, Inedible	10,191,720	3.7
Special Traffic (TOFC, COFC, etc.)	12,107,008	4.4
Non-Carload Shipments	<u>1,143,615</u>	<u>0.4</u>
	<u>272,543,161</u>	<u>100.0</u>

* less than 0.1%

Source: STATCAN 52-207. See Appendix A for Explanation of Terms Above.

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From the figures in TABLE 1, we see that crude materials are the most important commodity type carried by railways; fabricated materials are second with total tonnage approximately half of the former. Only about 4 per cent of the tonnage carried corresponds to end products which are transported mostly by truck.

TABLES 2 and 3 also give some revealing quantitative comparisons, the emphasis being placed on tonnage originated and terminated, firstly by province and then, secondly, by region in Canada.

TABLE 2
REVENUE FREIGHT CARRIED BY RAILWAYS - 1977
(Short Tons)

	ORIGINATING ('000 TONS)	% OF TOTAL	TERMINATING ('000 TONS)	% OF TOTAL
Newfoundland	25,193	9.2	1,590	0.6
Prince Edward Island	177	0.1	235	0.1
Nova Scotia	11,995	4.4	12,732	4.7
New Brunswick	4,859	1.8	6,150	2.3
Quebec	54,139	19.8	81,463	30.0
Ontario	69,372	25.5	84,676	31.2
Manitoba	10,256	3.8	14,935	5.5
Saskatchewan	29,935	11.0	6,262	2.3
Alberta	28,923	10.6	10,058	3.7
British Columbia	36,377	13.4	53,236	19.6
Yukon and NWT	1,019	0.4	135	*
Canada	272,245	100.0	271,471	100.0

* less than 0.1%

Source: STATCAN 52-205.

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TABLE 3REGIONAL FREIGHT CARRIED BY RAILWAYS - 1977

<u>REGION</u>	<u>PERCENTAGE OF ORIGINATING TONNAGE</u>	<u>PERCENTAGE OF TERMINATING TONNAGE</u>
Maritimes	15.5	7.7
Central Canada	45.3	61.2
Western Canada	38.8	31.1

Source: STATCAN 52-207.

Uneven distribution of the population, natural resources and industry result in large imbalances in provincial and regional traffic. The most unbalanced province is Newfoundland, where the originating freight is fifteen times larger than the terminating freight. The most noticeable imbalance in the regional traffic is in the Maritimes, the percentage spread being explained by the iron ore shipments out of Labrador.

Revenue freight carried during the period 1967-77 increased at a rate of 4.2 per cent per year, from 96 to 145 billion short tons in 1977. Both tonnage and average line haul have risen during this ten year period. An annual growth of 2.6 per cent in tonnage carried, plus an increase of 1.8 per cent per year in average line haul show that the rail mode is becoming increasingly dedicated to carrying long distance bulk freight.

Average car capacity has also been growing continuously. In the period 1971-76, capacity per car increased by 12 per cent. Freight carrying capacity of our rail system increased by 1.8 per cent per year to 13,258,720 short tons in 1977.

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In this same ten year time frame, the length of track operated increased marginally by about 1 per cent to 43,476 miles of first main track and a total of 59,022 miles for all types of track.

TABLE 4
COMMODITIES CARRIED BY RAIL

	1969 SHORT TONS	%	1977 SHORT TONS	%	ANNUAL % GROWTH (DECLINE) IN TONS)
Live Animals	214,373	0.1	102,838	*	(9.6)
Food, Feed, Beverage and Tobacco	28,408,105	13.6	35,841,335	13.1	2.9
Crude Materials, Inedible	103,318,717	49.5	142,318,443	52.1	4.1
Fabricated Materials, Inedible	62,907,600	30.1	70,838,202	26.1	1.5
End Products, Inedible	8,453,637	4.0	10,191,720	3.7	2.2
Special Types of Traffic (TOFC, COFC)	4,164,164	2.0	12,107,008	4.4	14.3
Non Carload Freight	1,475,105	0.7	1,143,615	0.4	(3.2)

Soruce: STATCAN 52-207.

Looking at the period, 1969-77 (TABLE 4), there were a number of changes in the composition of the commodity mix carried by rail. A marked rise in container traffic during this period resulted in a large yearly growth of special traffic. Within this category we have mixed carload freight, piggyback (TOFC) motor common carrier trailers, piggyback (COFC) motor common carrier containers, piggyback (TOFC) other trailers and

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piggyback (COFC) other containers. The other commodity that also kept pace with the growth of the economy was crude materials. The tonnage hauled for non carload freight and live animals decreased, mainly due to increasing truck competition. Comparing the numbers for crude materials for both 1969 and 1977, we notice a trend toward specialization as an increasingly larger percentage of capacity is dedicated toward this commodity group.

Considering the nature and location of desired facilities and services by firms, the MTC Industrial Transportation Study of 1978 found that approximately 30 per cent of the firms interviewed indicated a desire for facilities or services which were not available to them at the time they were surveyed. Three times as many respondents expressed a desire for services as compared with facilities and half of all service improvement requests were directed at trucking. Rail and air service improvements received considerably less attention. Respondents desiring improved facilities were, however, in large part, interested in additions to rail infrastructure. Truck and water facility additions were mentioned only one-third as often as rail facility additions.

Truck, express, and air modes were similar in that there was a much greater frequency of requests for services than facilities among those modes. This was contrasted by the rail mode in which the frequency of requests for additional facilities and services were roughly equivalent. This suggested that respondents generally perceived truck, express and air infrastructure to be adequate for their needs, but felt they were

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being offered limited services for one reason or another. Rail improvements concerning facilities were concerned with acquiring rail sidings for handling carload shipments. This desire may be in response to increasing transport costs by truck and/or increasing volumes of production output.

Given this information, we can reasonably infer that there is, indeed, substantial potential for an increased use of the rail mode by Ontario industries.

Looking briefly, therefore, at railway technology, the major debate therein appears to centre on the issue of electrification. In the event that oil prices rise dramatically, a very plausible assumption, electrification could become a viable consideration.

Unit trains stand to become an important force in rail freight movements. Unit trains are expected to increase tonnage carried and more commodities are expected to join the list of goods carried by these trains. It is projected that equipment will get better, lighter and more durable. At the present time, in Canada, unit trains move such products as: acid, logs, potash, gypsum, limestone, sulphur, coal, iron, ore pellets, and phosphate rock. Increased use of unit trains will require special track maintenance, frequent inspections and possibly new rail equipment. Unit trains, containers and trailers will increase the load per car.

New developments in car locating equipment are anticipated coupled with the use of a computer for scheduling and switching--a move that will reduce transit time.

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When summed, these technological changes become a central factor in the future development of the rail mode.

The supply and cost of capital are also very important factors in railway expansion. Major capital expenditures are required in the following areas:

- (a) rail electrification,
- (b) capacity expansion through double tracking,
- (c) infrastructure for multimodal systems,
- (d) rolling stock--locomotives and cars,
- (e) maintenance of the existing overall system,
- (f) computer based information and management systems.

It is also interesting to note that energy costs, more specifically, the cost and supply of diesel fuel is not as critical for the railways as it is for the trucking mode, due to rail's more efficient energy usage. Energy costs are also a much smaller component of the total cost of railways. Electrification exists as an excellent alternative should the situation arise. Indeed, the long run significance of escalating energy costs and diminishing supply are much more pronounced in trucking than in rail transport.

It should also be mentioned with respect to labour costs that railways have been able to achieve increasing productivity from their labour force during the past ten years. Continued improvements in the operations of the railways (longer trains, unit trains, etc.) should balance expected increases in labour costs. The railways are not as dependent on labour as a means to increase output and as a result should not be as vulnerable to future shortages in the labour force.

CHANGES FROM RAIL MODE TO ALTERNATIVE TRANSPORTATION MODE
AND POSSIBLE REASONS FOR THE SHIFT

By 1975, the trucking mode was the carrier of 18.3 per cent of the total freight tonnage of 636.1 million tons moved in Canada. Rail mode enjoyed 35.8 per cent of total tonnage, marine mode accounted for 27.2 per cent and pipelines had 18.8 per cent of the total Canadian tonnage. However, despite its low share of tonnage as compared with other modes, trucking had the largest share of operating revenue in 1975--42.8 per cent of the 5,400 million dollars of freight transport revenues. On the revenue side, rail's share was 37.7 per cent, water had 12.3 per cent, pipeline enjoyed 5.2 per cent and air accounted for 2 per cent of total revenue.

In the last 20 years, more and more shippers are using the truck mode to move a wider range of commodities. From 1960 to 1975, the trucking mode increased its share of revenues by 17.6 per cent while rail's share decreased by 15.7 per cent.

The increase in truck share can be explained in part by the increase in the relative proportion of manufactured goods in freight movements and the deconcentration of manufacturing activities from the core of major urban areas which were served by rail and marine. The growth of manufacturing has been more than twice that of the primary sector. The shipment of manufactured goods originating in Toronto and Montreal between 1960 and 1975, fell from 17 per cent to 10 per cent of total volume shipped. (MOT, 1978) This trend is expected to continue throughout Canada, causing an increase in share for the trucking mode.

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The expansion of the highway network during the sixties allowed the truck mode to reach new markets and considerably increase its volume of operations.

Considering Ontario and her lumber industry as an example, the growth rate of lumber exports to the United States from 1966 to 1976 was approximately 10 per cent per annum. Between 1970 and 1975, Ontario producers shipped roughly 6 per cent of Canada's total lumber exports to the United States.

During the 1966-76 decade, the absolute volume of lumber handled by the rail mode remained fairly constant. However, as a result of a tremendous increase in the volumes of Ontario lumber exports being transported by truck, the railways' relative share of lumber exports declined from 61 per cent in 1966 to only 25 per cent in 1976. During this period, the highway mode increased its share of this traffic both in absolute and relative terms. In absolute terms, the volume of lumber transported from Ontario to the United States by the highway mode increased from 95 million FBM (foot board measure) in 1966 to 454 million FBM in 1976, while in relative terms, the highway carriers increased their share of the traffic volume from 40 per cent in 1966 to 75 per cent in 1976.

Softwood lumber from Ontario to the United States enjoyed relatively stable growth during the decade under consideration, rising from 140 million FBM in 1966 to 573 million FBM in 1976. In 1966, the rail mode carried 60 per cent of this

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traffic. However, the railway share of softwood lumber exports declined continuously to only 25 per cent in 1976. During the same period, the highway mode increased its share of softwood traffic from 40 per cent in 1966 to 74 per cent in 1975. In absolute terms, the highway mode increased its share from 58 million FBM in 1966 to 424 million FBM in 1976.

The relative shift towards more truck usage may have resulted from more and better highways, and technological improvements in trucking which have allowed highway carriers to offer more competitive rates and/or better, more reliable and faster service than that offered by rail carriers.

The transportation of lumber by road is generally cost and service competitive with the rail mode for short haul traffic. Consequently, much of Eastern Canada's lumber exports to the northeastern United States are transported by road. In many instances, the decision to employ road transport as opposed to rail is simply influenced by the absence of rail facilities at either the loading or unloading point, comparative ownership costs of vehicles by the producer or customer, road standards and other factors which vary from one region to another.

Apart from transportation rates, some shippers may have turned to truck haulage due to difficulties in railway car supply--an issue often raised by lumber producers. The trucker, because of his flexibility can often offer better and more responsive service, particularly to United States market locations.

FACTORS WHICH AFFECT THE SHIPPER'S CHOICE OF TRANSPORTATION MODE

In a Government of Ontario shippers' survey, the following factors were highlighted (MTC, 1975):

- 1) Relatively more shippers in medium and small cities employ private truck.
- 2) Truck common carrier was being used by a large proportion of shippers in industry groups such as tobacco, textiles, furniture, electricals and commodities defined as low volume-high price and awkward units.
- 3) Private truck shipping was used extensively in the following sectors: food and beverages, wood, lumber, paper, retail trade and low value-high volume commodities.

The most important factors mentioned by the shippers as decision variables affecting their modal choice were:

- 1) Cost
- 2) Speed of Delivery
- 3) Special Commodity Characteristics
- 4) Immediate availability

The main criteria indicated by shippers in the survey for carrier selections were related mostly to service variables: consistent on-time delivery and reliable pick-up counted for 56 per cent of the most important criteria for modal selection. As well, shippers indicated that transit time and undesirable performance most often triggered shifts to alternate carrier modes (they make up 46 per cent of reasons for change).

Considering the rail mode transportation sector, several points can be made about the nature of services.

1) Frequency and Time in Transit

The frequency of service by rail is at least daily for most major city pairs and somewhat less frequent for those pairs with less traffic density.

Rail transit times are comparable to those of truck for container and piggyback traffic.

2) Reliability

Loss, breakage and delays have usually been worse for rail break-bulk general cargo traffic than for truck. Improvements in reliability have been achieved in rail with the advent of containers and piggyback operations, but the mode is still more susceptible to delays and strike interruptions than truck.

A recent CTC survey of shippers in the forest and mining industry found that carrier delays ranked fifth in a list of shippers' problems and it was stated as a major problem by about 6 per cent of shippers surveyed.

(McLaughlin, 1978)

TABLE 5 shows the percentage ranking assigned by the shippers in the survey to quality and reliability for rail.

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While most shippers are satisfied with the quality of service, reliability is a reason for complaint in most cases.

TABLE 5
LEVEL OF SERVICE - RAIL

LEVEL	RELIABILITY (% OF ANSWERS)	QUALITY (% OF ANSWERS)
Unsatisfactory	24.3	13.1
Poor	29.3	20.8
Good	46.4	66.1

Source: McLaughlin, 1978

3) Equipment Availability

One of the major problems facing shippers from the forest and mining sectors was the lack of equipment and the poor equipment conditions which ranked high in a list of major problems indicated by shippers as shown in TABLE 6.

TABLE 6
RAILWAY COMPLAINTS
FOREST AND MINING INDUSTRIES

PROBLEMS	RANK		PER CENT	
	FOREST	MINING	FOREST	MINING
Lack of Equipment	1	2	31.0	20.7
Poor Equipment Conditions	3	3	7.5	12.6

Source: McLaughlin, 1978.

In this survey, shippers felt that railways had not done enough to maintain an up-to-date inventory of modern, efficient and specialized equipment.

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APPENDIX A

Crude materials, inedible (C.L.)Live animals (C.L.)

Raw hides and skins (including fur skins)
 Primary tannage
 Crude animal products, inedible, n.e.s. (excluding fibres)
 Seeds for sowing, n.e.s.
 Flaxseed
 Rapeseed
 Soybeans
 Soyabams
 Oil seeds, oil nuts and oil kernels, n.e.s.

Rubber and allied gums, natural
 Peatmoss and mosses, n.e.s.
 Other crude vegetable materials, inedible, n.e.s.

Logs and bolts of wood
 Fence posts, pitprops and piling of wood
 Round timber, n.e.s.
 Pulpwood logs
 Pulpwood chips
 Christmas trees
 Other crude wood materials, n.e.s.
 Silk, wool and animal hair
 Cotton
 Vegetable and man-made textile fibres (excluding cotton)
 Bauxite ore and alumina
 Copper ores and concentrates
 Copper matte and concentrates
 Iron ore and concentrates
 Lead ore and concentrates
 Manganese ore
 Nickel-copper ores and concentrates
 Nickel ore and concentrates
 Matte, nickel, copper-nickel or nickel-iron chromium alloy
 Tungsten ore and concentrates
 Zinc ore and concentrates
 Lead and zinc ores and concentrates

Metallic ores and concentrates, n.e.s.
 Iron and steel scrap
 Non-ferrous metal scrap (including precious metal scrap)
 Slags, drosses and other by-products, n.e.s.
 Anthracite coal
 Bituminous coal
 Lignite coal
 Coal, n.e.s.
 Natural gas
 Natural gas and other crude bituminous substances
 Asbestos, unmanufactured, crude and fibre
 Clay
 Other crude refractory materials
 Natural abrasives
 Sand, industrial
 Gravel
 Building stone, rough
 Silica or silica, n.e.s.
 Agricultural limestone
 Limestone, furnace or foundry, and fluxing stone
 Limestone, crushed or broken, n.e.s.
 Stone, n.e.s. (including stone refuse)
 Barytes, natural
 Gypsum
 Pyrites, iron (except roasted)
 Nepheline syenite
 Phosphate rock
 Common salt, rock or bulk
 Common salt, n.e.s.
 Liquid sulphur
 Sulphur, n.e.s.
 Non-metallic minerals, crude, n.e.s.
 Textile rags and waste, n.e.s.
 Paper waste
 Slag (excluding basic and ash, waste)
 Wood waste, n.e.s.
 Waste materials, n.e.s.

Fabricated materials, inedible (C.L.)

Leather and dressed furs and rubber fabricated materials.

Lumber
 Flooring
 Railway ties
 Shingles and shakes of wood
 Sawmill products, n.e.s.
 Veneer
 Plywood
 Wood building boards, n.e.s.
 Millwork (woodwork)
 Coopers stock and box, crate and package shooks
 Other wood fabricated materials, n.e.s.
 Wood pulp
 Pulp, n.e.s.
 Newsprint paper
 Groundwood printing and specialty paper
 Book paper
 Fine paper, tissue paper and sanitary paper
 Wrapping paper
 Paperboard, n.e.s.
 Building paper

Fabricated materials, inedible (C.L.) - Continued

Building board, n.e.s.
 Paper, n.e.s.
 Batts, batting, wadding and felt
 Cordage, twine and rope
 Cotton broad-woven fabrics
 Jute broad-woven fabrics
 Textile fabricated materials, n.e.s.
 Animal oils and fats (excluding marine)
 Fish and marine animal oils
 Cottonseed oil and linseed oil
 Soyabean oil
 Vegetable oils and fats, n.e.s.
 Chemically modified oils, fats and waxes and their derivatives
 Turpentine, rosin and rosin oils, spirits and acids
 Gum, wood and vegetable extracts
 Carbon blacks
 Chemical elements
 Sulphuric acid
 Inorganic acids and oxygen compounds of non-metals or metalloids, n.e.s.
 Sodium hydroxide
 Inorganic bases and metallic oxides, hydroxides and peroxides, n.e.s.
 Sodium sulphate
 Sodium carbonate
 Metallic salts and peroxy-salts of inorganic acids, n.e.s.
 Calcium carbide
 Inorganic chemicals, other, n.e.s.
 Hydrocarbons and their derivatives
 Alcohols and their derivatives
 Phenols, ethers, aldehydes, ketones and their derivatives
 Organic acids, their anhydrides, halides, peroxides, paracids and derivatives
 Nitrogen, function compounds
 Organic chemicals, n.e.s.
 Explosives, fuses and caps
 Ammonium phosphates
 Murate of potassium (potash)
 Fertilizers and fertilizer materials, n.e.s.
 Agricultural chemicals, formulated
 Adhesives
 Synthetic rubber
 Plastic materials, not shaped and basic shapes and forms

Pigments, lakes and toners
 Paints and related products
 Chemical specialties, industrial, n.e.s.
 Gasoline
 Aviation turbine fuel
 Diesel fuel
 Fuel oil, n.e.s.
 Lubricating oils and greases
 Petroleum coke
 Coke, n.e.s.
 Refined and manufactured gases, fuel type (L.P.G.)
 Asphaltic bitumen
 Other petroleum and coal products
 Ferro-alloys
 Pig iron
 Ingots, blooms, billets and slabs, iron and steel
 Primary iron and steel, n.e.s.
 Castings and forgings, iron or steel
 Bars and rods, steel
 Plates, steel, fabricated
 Sheet and strip, steel
 Structural shapes and sheet piling, iron or steel
 Rails and railway track materials
 Pipes and tubes, iron and steel
 Wires, iron or steel
 Aluminum paste, powder, pigs, ingots and shot

Aluminum and aluminum alloy fabricated material, n.e.s.

Copper and alloys in primary forms
 Copper and alloys, n.e.s.
 Lead and alloys
 Nickel and alloys
 Tin and alloys
 Zinc and alloys
 Other non-ferrous base metals and alloys
 Tanks
 Bolts, nuts, nails, screws and basic hardware

Metal fabricated basic products, n.e.s.
 Natural stone and stone products, chiefly structural
 Bricks and tiles, clay
 Fire brick and similar shapes
 Dolomite and magnesite, calcined
 Refractories, n.e.s.
 Glass basic products
 Asbestos and asbestos-cement basic products
 Portland cement, standard
 Concrete pipe
 Cement and concrete basic products, n.e.s.
 Plaster
 Gypsum wallboard and sheathing
 Gypsum basic products, n.e.s.
 Lime, hydrated and quick
 Non-metallic mineral basic products, n.e.s.
 Bituminous pressed or molded fabricated materials
 Miscellaneous fabricated materials

End products, inedible (C.L.)

Power boilers
Engines and turbines, general purpose
Electric generators and motors
General purpose industrial machinery, n.e.s.
Conveying, elevating and materials handling equip-
ment.
Construction and maintenance machinery and equip-
ment.
Special industry machinery, n.e.s.
Agricultural machinery and equipment
Tractors
Railway rolling stock
Passenger automobiles and chassis
Motor vehicle engines, accessories, parts and as-
semblies.
Road motor vehicles, n.e.s.
Ships and boats, aircraft and miscellaneous vehi-
cles, n.e.s. (including parts and accessories).
Rubber tires and tubes
Communication and related equipment
Heating equipment
Air-conditioning and refrigeration equipment
Plumbing equipment and fittings
Electric lighting, distribution and control equip-
ment, n.e.s.
Furniture and fixtures
Electric appliances and accessories
Other equipment
Facial tissues and paper handkerchiefs
Apparel and accessories, n.e.s.
Toiletries, cleaning preparations and household
chemical specialties.
Paper napkins, towels and toilet paper
Tableware, paper
Kitchen utensils, cutlery and tableware, n.e.s.
(excluding silverware).
Household and personal equipment, n.e.s.
Medicinal and pharmaceutical products and supplies
(including ophthalmic goods and orthopaedic app-
liances).
Printed matter
Stationers' supplies, photographic goods, musical
instruments and recreational supplies.
Firearms, weapons and ammunition
Prefabricated buildings and structures
Miscellaneous products, n.e.s.
Metal containers
Glass containers
Bags, paper
Other paper containers
Wooden containers
Shipping and distribution containers and clo-
sures, n.e.s. (not C.O.F.C.).
Containers and closures, n.e.s. (not C.O.F.C.) ...

Paper end products
Plastic end products
Remaining end products

Special types of traffic (C.L.)

Shipping containers returned empty (not C.O.F.C.)
Mixed carload freight, n.e.s.
Freight forwarder and shipper association traffic

Piggyback (T.O.F.C.) - Motor common carrier trail-
ers (Plans I and V).(1)
Piggyback (C.O.F.C.) - Motor common carrier con-
tainers (Plans I and V).(1)
Piggyback (T.O.F.C.) - Other trailers (Plans III,
IV and open tariff).(1)
Piggyback (C.O.F.C.) - Other containers (Plans
III, IV and open tariff).(1)

Non-carload freight

Non-carload shipments (L.C.L., express, etc.)

n.e.s. - not elsewhere specified
C.L. - carload
C.O.F.C. - container on flat car
T.O.F.C. - trailer on flat car
L.C.L. - less than carload
L.P.G. - liquified petroleum gas

ADDENDUM
TO
COMPETITION IN FREIGHT TRANSPORT
IN ONTARIO:
PRESENT AND POTENTIAL INDUSTRIAL USES
OF
RAIL SERVICES

INDUSTRY SECTOR POLICY BRANCH
MINISTRY OF INDUSTRY AND TOURISM
JULY 18, 1980

Further to our June 30th paper on COMPETITION IN FREIGHT TRANSPORT IN ONTARIO, a forecast scenario by Wolff and Kuczer (August, 1979) should be cited.

This particular forecast was designed to provide an environment in which conditions would be conducive to the development of the rail industry. The economic and energy related assumptions used to generate this situation were slow industrial growth rates and severe energy shortages. FIGURE 1 gives a more detailed breakdown of the model's assumptions.

It should be noted that this is only one of the scenarios developed in the study by Wolff and Kuczer. While Wolff and Kuczer did not assign probabilities to the likelihoods, the potential for this scenario to occur must be considered relatively low.

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FIGURE 1
ASSUMPTIONS

	ECONOMIC	DEMOGRAPHIC	GOVERNMENT ACTION
"HIGH RAIL PROFILE"	<p>Increased export of grain (+ 50%)</p> <p>Increased export of resources (+10%).</p> <p>Exports of fuel reduced to 0 by the year 2000.</p> <p>Imports of fuel increased by 34% by the year 2000.</p>	<p>More growth in large urban areas.</p>	<p>Reduced highway investment.</p> <p>Increased licensing fees for trucks.</p> <p>Federal funding of rail electrification.</p> <p>Grain handling system improved by 1990.</p> <p>Rationing of fuel-rail priority.</p>
	ENERGY	TRUCK SUPPLY	RAIL SUPPLY
	<p>World price to increase by 130% by the year 2000.</p> <p>Canadian prices at par with world levels by 1982.</p> <p>Decreased investment level in 1980-90.</p> <p>Electrical energy expansion in 1990-2000.</p>	<p>Capital costs slow new technology.</p> <p>No extensive investment in freight consolidation. Productivity improves at slower rate.</p> <p>Pickup and delivery (P&D) fleets become electrified.</p>	<p>Government support for system improvements and equipment replacement. Productivity improved by unit trains and electrification.</p> <p>No capacity problems encountered.</p>
	INTERMODAL	PRIVATE TRUCK	SHIPPER
	<p>Increased investment by 1985 in intermodal terminals.</p> <p>CN and CP increases in ownership of trucking leads to more trailer-on flatcar (TOFC) movements.</p>	<p>Owner operators and small fleets are hit hard by fuel shortages.</p> <p>Private fleets are used only for short haul and pickup and delivery (P&D) operations.</p>	<p>Emphasis on cost of transportation away from service factors in mode choice.</p>

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The predictions about energy are of special significance in this scenario. World prices are expected to grow by 130% by the year 2000. A direct corollary of this assumption is that the Canadian Government will be forced to eliminate the energy support price subsidies now in effect, resulting in world oil prices in Canada by 1982. The shortage of energy fuels encourages strong growth in the electrical energy sector and the majority of investment in 1988-2000 goes in this direction.

Government policy in transportation is directed toward encouragement of the rail sector. Provincial government investment in highways is limited to routine maintenance. Rapidly increasing costs and decreased private automobile traffic cause increases in provincial licensing fees. Deterioration in the highway system causes some reductions in provincial weight restrictions. The changes are not made on a national scale and as a result, the weight and size limits vary from region to region. The federal government provides funding for improvements to the grain handling system, thus permitting the increase in exports by 50 per cent by 1985. The severe shortages of diesel fuel in 1982-1987 cause rationing. The railways receive priority in this rationing scheme. Finally, the restrictions placed on transportation of freight force the federal government to invest in rail electrification programs in 1987-1995.

Assumptions about modal behaviour are consistent with the above economic and energy assumptions. During the projected fuel crisis of 1982-1985, the trucking industry is encouraged to introduce technological improvements to increase energy efficiency. These improvements are forthcoming by 1985-1990, but low profitability in the industry slows the adoption of

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new equipment. Therefore, productivity--both fuel and labour--fails to increase until 1990. The private trucking industry faces more severe problems. Small fleets and independent operators are unable to get sufficient fuel in 1982-1985 and many firms are forced into bankruptcy. Increased costs for larger fleets force them to specialize in short haul traffic. The rail mode experiences productivity gains throughout the period. Investment in electrification and mainline track minimizes capacity problems. Demand for intermodal services increases rapidly and the railways provide increased capacity in intermodal terminals by 1985.

Figure 2 shows some forecasted freight volumes for this scenario.

FIGURE 2
PRIVATE TRUCK
AND
INTERMODAL FREIGHT VOLUMES
(Thousands of Long-Tons)

	1976	1980	1985	1990	1995	2000
Private Truck	78,481	85,591	73,274	81,847	92,651	95,903
Intermodal Freight (TOFC) (COFC)	6,984	7,818	19,666	24,388	28,129	31,279

TOFC = Trailer on flatcar

COFC = Container on flatcar

The private trucking sector is expected to show net decreases in tonnage between 1980 and 1985. This will mainly be caused by a reduction in the number of private fleets and increased use of TOFC services. The projections for intermodal freight volumes indicate a rapid growth between 1980-1985, (a growth that the industry may not be able to handle), caused by

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switching from for-hire and private trucking. In terms of ton-miles, this growth will be even more significant, since the average line-haul for intermodal shipments is large. The slowdown in growth for intermodal services, after 1985, is caused by the improved state of the trucking industry after this time.

Although growth in tonnage and ton-miles is low for the trucking industry, the revenue projections keep pace with the rail mode. This is caused by two factors; cost increases have forced the trucking industry to rapidly increase rates and the shipments that have switched to rail are relatively low revenue items.

Rail tonnage has grown most rapidly in the food, feeds and beverages sector (121%), end products sector (119%), and the crude materials sector (116%). These increases are caused by increases in grain exports and shifts in mode choice on the part of shippers. The trucking industry has continued its historical growth pattern in the end products sector (110%), but has grown slower in the food, feeds and beverages sector (51%), and the crude materials sector (85%). The general picture presented in this scenario is one in which the rail and truck modes compete in a number of markets.

INPUT REQUIREMENTS

The inputs of energy, labour, and operating equipment show different use patterns in this scenario. Energy use is expressed in terms of millions of gallons of diesel fuel, even though the rail mode (and to a limited extent the truck mode) will be primarily dependent on electrical energy in the last decade. Energy use has increased by 68% for the entire forecast period. This is attributed to the shift in traffic from truck to rail

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and the increased efficiency obtained in the last decade. The increase in efficiency is caused by the switch to electrical energy by the rail mode and the introduction of energy efficient vehicles by the trucking industry. The increase in demand of 200 million gallons in the 1980-1987 period will contribute to shortages in the oil industry. These shortages will act as the trigger to move the federal government into a rail electrification program.

The cost of energy will cause serious problems for the trucking industry. The rapid price increases of 1979-1983 will not be offset by productivity improvements. Therefore, rates will rise. The rail industry will also be affected by increased fuel prices in 1979-1983. Productivity gains will offset the increase slightly but rail rates will also increase rapidly in this period.

Considering labour requirements, we find that the relatively slow growth in the manufacturing and service sectors, in this scenario, reduces the demand for labour significantly. Under different circumstances, the projected increased demand of 185,000 employees would be difficult to satisfy, but in this scenario the unemployment rate exceeds 5% throughout the forecast period. Therefore, labour supply should not cause problems for either mode. Increases in wage rates are expected to approach 9% in 1978-1980 and then fall to about 6% by 2000. This places wage rate changes slightly above changes in the inflation rate. These increases will be offset by productivity gains in the rail industry. The trucking industry will not experience the offsetting productivity gains

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and operating costs will increase more rapidly than the inflation rate.

The demand for operating equipment will not be substantial in the trucking industry. Given the slow increases in output and expected low productivity gains, straight trucks will increase by 65%, tractors by 67%, and trailers by 69%. These estimates imply an average growth rate of 2.7% per year. The actual growth rate will be closer to 2% up to 1990 and 3.3% from 1990-2000. The size and technological design of vehicles will not change significantly until 1990. After that year, new engine designs and lighter vehicles will lead to increased fuel efficiency and payloads. The increase in fleet size is expected to cost \$55 million per year up to 1990 and approximately \$120 million per year thereafter. The replacement cycle up to 1987 is expected to exceed the current 8-10 year pattern. From 1987 to 1995, when the industry becomes healthier and new technological developments are introduced, the replacement cycle will fall to approximately five years in length. After 1995, the cycle will be extended to average 7-8 years. The projected annual costs of replacement will be approximately \$100 million up to 1987, \$225 million from that year to 1995 and \$175 million thereafter. Therefore, the total annual capital costs are expected to average \$155 million in 1978-87, \$330 million from 1987 to 1995, and \$295 after 1995. (These estimates are all in constant 1976 dollars.)

Operating equipment for the railways is expected to increase rapidly in number throughout the forecast period. The capital cost required to replace existing equipment and maintain right-of-way at current output levels is estimated to range between

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\$450 and \$500 million in 1976 dollars. Since the railways are not expected to specialize in bulk shipments, in this scenario, this estimate is probably reasonable for the entire forecast period, 1976-2000. The total cost to electrify the high density lines of CN and CP has been estimated to be \$3.3 billion. If the cost of this program is spread over five years (1990-95), the annual cost will be approximately \$650 million. This investment will lead to a reduction in annual replacement and maintenance costs to \$250 million during the five year period. After 1995, the annual replacement cost will rise to \$500 million and the cost of increased output will rise to \$100 million. Therefore, the total annual investment required in the railway system will be \$505 million up to 1990, \$900 million from 1990-1995 and \$600 million after 1995. This does not include the cost of improvement to the grain handling system during 1980-85.

INFRASTRUCTURE REQUIREMENTS

The total growth in output (in tons) in this scenario is approximately 100 per cent. The major point is that in this scenario, the rail mode carries a much larger share of the traffic. This change in modal split will likely cause serious problems for the national railway infrastructure. The trucking mode experiences a much lower growth rate overall, but regional variations may lead to some isolated problems in the trucking infrastructure.

The main infrastructure items required for the trucking industry are highways and terminals. The intercity highway system should be able to support the modest growth in traffic projected in this scenario. The high fuel costs of 1980-85 will

reduce travel by private automobile, which should increase the potential capacity of the trucking industry. Regional truck volumes indicate above average growth in the Prairies during 1980-86. Provincial governments are not expected to make major investments in the highway system, but regular maintenance of the existing system should provide sufficient capacity in the Prairies. The growth rates projected for the other regions should not pose any serious problems.

This scenario assumes that urban population growth will occur in the major metropolitan areas, as opposed to the growth in smaller urban areas. This results in the majority of truck traffic moving between and within large urban areas. Thus, even with the reduced truck volumes, some congestion problems could occur within these areas. This problem is magnified by the assumption that freight consolidation will not be widespread. The trucking industry will not be in a financial position to fund new freight terminals until 1990. Therefore, unless government funding for consolidation terminals becomes available, congestion will be common around large metropolitan areas.

The rail industry is faced with rapid growth during the entire forecast period. Increased grain shipments by 1985 will lead to congestion problems within the Prairies and between the Prairies and B.C. This problem will become serious by the late 1980s at which time, motivated primarily by energy problems, the federal government will provide funding for rail electrification.

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This step should lead to increased speeds and train length which will improve capacity, but will place constraints on rail yards. Much of the annual investment for upgrading (\$250 million) the existing system in 1990-1995 will be directed toward rail yard improvements. The growth in intermodal freight in 1980-85 will require major investment in intermodal terminals. Terminals will be built or expanded in Vancouver, Edmonton, Winnipeg, Toronto, Montreal, and Moncton during this period. Thus, the railways (with government assistance) will be forced to invest large sums in infrastructure during the entire forecast period. Failure to do this will lead to significant reductions in freight transportation services, since the trucking mode will be in no position to increase capacity.

ROLE OF GOVERNMENT

ONTARIO TASK FORCE ON PROVINCIAL RAIL POLICY

OPPORTUNITIES
AND THE CHANGING ROLE OF GOVERNMENT IN THE
FINANCIAL SUPPORT OF TRANSPORTATION

A Paper by

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August 1980

OPPORTUNITIES
AND THE CHANGING ROLE OF GOVERNMENTS IN THE
FINANCIAL SUPPORT OF TRANSPORTATION

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OPPORTUNITIES
AND THE CHANGING ROLE OF GOVERNMENTS IN THE
FINANCIAL SUPPORT OF TRANSPORTATION

Canada is the world's second largest country in size. Its wealth, represented by natural resources and industrial development, is widespread: even those regions that contributed relatively little to the country's economy in the past, such as the North, suddenly emerged as major future sources of vitally needed energy.

Yet, the population of this vast land is less than 24 million. Compared with other countries, this is a very small number in relation to the country's size: the United States, with a territory somewhat smaller than Canada, has a population that is nearly ten times larger than Canada's population.

The combination of a relatively small number of people and of the long distances that separate them raises the importance of transportation to a unique level. Whereas a country with denser population, such as the United States, can regionalize its economy and achieve a high degree of self-sufficiency in each region without sacrificing economies of scale, Canada must rely much more on transportation to achieve the efficiencies that require large markets and production units.

Government policies must recognize this unique situation. Whereas Canada is fortunately endowed by nature and by its history, with the availability of both material and human resources and has significant advantages in these respects over most other nations, its one disadvantage is the need for bringing all of these resources together through long distance transportation. Canada must compete with smaller countries that are able to spend less on transportation, and may therefore enjoy a relative advantage.

1. NEED FOR GOVERNMENT INVOLVEMENT IN ALL MODES OF TRANSPORTATION

Because of the critical role of transportation in Canada's physical, economic and social makeup, there is no doubt that Government has a duty to ensure the availability of efficient transportation services.

In our economic and social system, most sectors of the economy and society can look after themselves with little need for Government involvement. Whereas there is no universal definition of the criteria that justify or call for Government intervention, it is probably acceptable to say that Government has a right and indeed, a duty to reduce the disadvantages over which the disadvantaged have no control.

Few people would question whether Governments should help the elderly, the handicapped, the sick and those who suffer disadvantage as the result of past mistakes or present crimes committed by others. The role of Government in these instances is to act as a "go-between" on behalf of society and to administer the transfer of funds from society as a whole, to the disadvantaged.

The question is whether people who suffer a disadvantage because of transportation problems belong in the same category as the examples mentioned? Has a community at a remote location in Northern Ontario the right to live at the same standards, for the same costs as one in Southern Ontario?

If the suggested test is applied to this case, i.e. the question is asked whether the hardship is the result of external circumstances, the answer is obviously affirmative. Thus, society, as a whole, should pay at least some of the extra costs of transportation to and from the remote location. The governments' role is the administration of such assistance.

The degree of Government assistance is, however, not well defined since transportation between the remote communities and the rest of the country is

costly. It may be argued, therefore, that assistance should not be provided beyond a reasonable level. The definition of reasonableness is a task that Government has to perform by setting objectives and policies.

This example, however simple, incorporates most of the roles that Governments are expected to have in transportation:

- o Set objectives and policies.
- o Ensure that the means of transportation are available to achieve the objectives.
- o Act as catalysts and exert their influence on business and on other levels of Government in support of the objectives.
- o Take all necessary steps to maximize transportation efficiency.
- o If necessary, provide assistance to mitigate disadvantages.

These functions must be performed by monitoring the present and by planning the future. Whereas monitoring mitigates present disadvantages, planning prevents future disadvantages. The latter is particularly important since individuals may often be more concerned with their own needs today than with somebody else's problems tomorrow. The Government's objectives in planning transportation are similar to its current objectives: ensure that facilities and efficient services will be available when needed. However, these may not necessarily be provided by the public sector.

The roles of Government are discussed further in this paper and applied to a range of transportation issues, related in particular to railway transportation. The paper, being part of a set of studies carried out by the Ontario Task Force on Provincial Rail Policy, focuses on issues related to the transportation needs of people and businesses in Ontario.

2. THE ROLE OF THE RAILWAYS IN SERVING THE PUBLIC INTEREST

There is no doubt that the public has a vital interest in the transportation of goods and people. The degree to which the public depends on the railways within the total system of transportation is discussed in this Section.

There are several modes of transportation that can carry the same goods and people as the railways. Whereas the country depends on transportation as a whole, it is not self-evident without further examination that it could not survive or even achieve a reasonable level of prosperity without railway services.

There are several countries in the world, some of them quite prosperous, which do not have railways of any significance. Trucks, pipelines, ships, automobiles, buses, and aircraft can carry out all the transportation functions that a country may need.

We shall see that this is far from being true in Canada.

Passenger Transportation

Passenger transportation is for the public at large and, therefore, by definition is in the public interest.

In Canada, rail passenger transportation has lost its once dominant role. It is estimated that of all person-kilometres travelled in Canada on trips over 150 kilometres from home, railways account for only about 3 percent. Whereas aircraft on the long haul and buses on the short haul can handle many potential rail passengers at lower public cost and at almost equal or better levels of convenience, there are important exceptions.

In Northern Ontario many communities that have developed along the rail lines, have limited or, in some cases, no road access, and no airport facilities.

At the other end of the scale, a rail link with very large traffic volumes, such as the Windsor-Toronto-Montreal link can support a rail service that competes with buses and air transport, even if all the costs are accounted for.

For short distances, in the vicinity of our most crowded cities, railways can perform a vital function by supplementing public transit services. In fact, in functional terms, there is very little difference between commuter rail and transit services: the difference is in technology and operating methods. Since it is not possible for a large city to function efficiently without considerable distances between peoples' homes and places of work and since not everybody has access to automobiles, public transit is an important public service and is in the same category as electric power, water, sewer, police, ambulance and fire services. Insofar as commuter railways are extensions of public transit operations, they are not only in the public interest, but are exceedingly important to the health and viability to such metropolitan communities as Toronto and Montreal.

There is, however, one notable difference between the services offered by the railways and those offered by the other public services mentioned. There is no practical substitute, at any cost, for electrical power, water supply, sewers, police, ambulances, or fire protection: none of these could stop functioning for any extended period of time without major negative consequences and none of them could be replaced by an alternate technology, even in the long term.

Railways used as an extension of public transit are different: in theory, they can be replaced by buses, albeit at different costs. When comparing the costs of rail services with those of buses, the costs of designated highway lanes must be included; with such lanes, buses could provide a level of service that is equal or higher than that offered by rail, considering the opportunity for more diversified origins and destinations and higher service frequencies.

However, once in place, commuter rail services form an integral part of the transportation system and could only be replaced by buses in the long term. The abandonment of rail services or their deterioration could therefore cause severe damage to the public, to the commerce and to the industry of a city in the short term.

Thus, in the short term, the public is dependent on commuter rail services to the same extent as on the other public services mentioned.

It can be concluded that:

- o commuter services are vital to the public interest in total,
- o commuter railways and buses on designated highway lanes could both provide the services at comparative levels of public convenience,
- o in the long term, economic considerations are among the most important factors in determining which of the two services should be preferred when all the costs to the public are totalled,
- o in the short term, the commuters are "captive" to an existing system which is therefore vital to the public.

Experience shows that beyond a certain density of traffic, the rail mode is more economical than buses, especially under high fuel prices and considering the potential for electrification. Rail lines are also more conducive to a planned development of suburban centers as opposed to haphazard "urban sprawl". Once established, however, they make the public captive to a monopolistic system that has no competition in the short term as opposed to a highly competitive bus system. Thus, a commuter rail system requires much more intensive Government involvement than a bus service, as discussed in more detail in Section 3.

Freight Transportation

In freight transportation, the question of economics is even more pronounced. In theory, all the commodities presently carried by the railway could be carried by another mode of transport. In fact, much of the high-priced light general cargo that moves in relatively small quantities from a diversity of origins to a diversity of destinations, already moves alternately by rail or truck in a competitive manner with little difference between the two modes in terms of cost and service.

The economic differences become substantially greater in the case of bulk commodities that move in large quantities from a relatively small number of origins to a small number of destinations. For these movements, the economics of rail transportation are overwhelming. An ongoing study on the long distance transportation of mineral aggregates in Ontario indicated that the incremental rail line haul cost (i.e. the cost of carrying the cargo one kilometre further after it has been loaded) is in the order of one cent per tonne-kilometre as opposed to a trucking cost of well over three cents per tonne-kilometre. That includes the cost of an exclusive truck road for bulk traffic.

The costs of transporting bulk commodities over long distances by truck are sufficiently high to jeopardize the economic viability of the production and consumption of some materials. It is not likely that Canadian grain, coal, potash, sulphur, iron ore, gypsum, could be sold in world markets if they were not moved to the ports at costs that can be only achieved by rail transportation. Alberta coal could not be used to generate electricity in Ontario if it was not moved by rail to Thunder Bay.

Whereas some of the commodities, such as coal, sulphur or iron ore, could be transported by slurry pipeline at a cost that may not jeopardize their

saleability, other commodities such as grain, potash or gypsum could not be moved that way. There are also other problems with pipelines that will be discussed later.

It is thus obvious that railway services are vital to the public interest for the movement of those bulk commodities that are of primary importance to the Canadian economy.

3. THE ROLE OF GOVERNMENTS IN RAIL TRANSPORTATION

Since rail services are in the public interest, Governments must become involved to ensure that the railways fulfill their obligations to the public.

Three sectors in rail transportation were identified in the previous Section in which railways were found to perform a duty that is in the public interest:

- o services for isolated Communities
- o commuter services
- o transportation of captive bulk commodities.

The justification and need for Government involvement in these sectors will now be discussed.

Rail Services for Isolated Communities

The maintenance of rail service to communities not well served by roads is necessary and prominently in the public interest. Safeguards against arbitrary abandonment of a rail service exist today. According to Federal regulations, railways cannot abandon a service unless alternative methods of transportation exist and all concerned communities, individuals and levels of Government are given a fair hearing. The Canadian Transport Commission is responsible for granting permission for the abandonment of services which has practically never been granted in the past if strongly opposed by a Provincial government.

The services must also be provided at affordable fares which invariably require Government assistance. This is being granted at present by the Federal Government, allowing VIA Rail to provide passenger transportation at affordable fares.

Commuter Rail Services

Under the commercial freedom granted the transportation modes by the National

Transportation Act and in the absence of any Government influence, the railways are free to:

- o charge any rates for their service, with an upper limit of 2.5 times variable costs for "captive" traffic as determined in accordance with Canadian Transport Commission Costing Order R-6313 and costing manuals approved by the Commission
- o determine the parameters of service such as train frequencies, timetables, transit times, train sizes, traffic priorities and other factors of convenience.

Whereas railways are not permitted to refuse service, the National Transportation Act or the Railway Act do not specify the level of service i.e. the time limit within which a railway has to provide the necessary cars or trains and the transit times from origin to destination.

With no Government involvement, the railways would follow their normal practice and carry out studies to determine the fares they could charge and the service levels they would have to offer in order to attract the number of riders who would provide them with maximum profits.

In the Toronto area, outside the territory served by the Toronto Transit Commission, the volume of passenger traffic and its distribution throughout the hours of the day are in a range in which a railway could not make a reasonable profit unless charging fares that would be disproportionately higher than the general fare levels charged by the TTC. Such rates would cause many people to choose either the private car as an alternate mode of transportation or bus services that would undoubtedly be offered under the umbrella of the high rail rates. In response to these modal choices, the Province would have to build additional highway facilities to accommodate the automobile and bus traffic.

It is likely that under complete commercial freedom, the rail commuter service would be found economically unfeasible vis-a-vis competition from the other modes of transport.

Thus, in a scenario of complete commercial freedom, commuters would use their automobiles or use buses to commute between their homes in the communities surrounding Toronto and their places of work in the city, and the Province would have to build highway facilities to accommodate them.

Government involvement would therefore be unavoidable, if in no other way, in the form of highway construction.

Considering that the efficient movement of people in the Toronto area is in the public interest as determined earlier, the scenario of complete commercial freedom appears to be unsatisfactory for the following reasons:

- o The cost of highway construction is not reflected in the cost of transportation perceived by the commuters; thus, their decisions may not lead to the most economical system.
- o People with no access to automobiles would have to pay high fares. This would place them in a disadvantaged position vis-a-vis people with cars or those living closer to their place of work; this situation would be the result of living and working in a very large metropolitan area, where differences in commuting distances are unavoidable for simple physical reasons.
- o Rail transportation is environmentally more desirable than road transport.
- o Efficient rail transportation conserves energy.

All of these are valid reasons for Government intervention in commuter rail transportation.

If the Government of Ontario found that commuter rail systems are more economical than a system based on automobiles and buses, it is justified to spend the funds that would otherwise be spent on roads to support the rail service.

Further funds could be provided for the second reason given above, i.e. assistance to the disadvantaged. This reason is common with the reasons why public transit should be assisted by Government in all cities. The reasoning is very simple:

- o There are inherent economies in city sizes. Business activities can be managed far more efficiently in a large city and the denser the concentration of diversified activities, the less time is lost in managing the affairs of business and Government.
- o For these reasons, the entire country and Province benefit from concentrations made possible by large cities. These benefits are however, accompanied by at least one disadvantage that results from city size: long commuting distances.
- o Considering the general public benefit derived from the large size of the city, Government is justified in spreading the costs of the associated disadvantage.

This is the logic that justifies the support by all levels of Government to transit services and to their extension: the commuter rail service.

In summary, the spreading of Toronto's population to neighbouring towns provides a good example of the manner in which benefits are derived by the public at large at the cost of disadvantages accruing to some. As suggested in Section 1, the disadvantages should be mitigated in such cases by

channelling public funds toward the reduction of the disadvantages and it is the Government's role to administer this policy.

We have only dealt so far with a comparison between commuter rail service and road transportation. There may be alternatives that are even better than either of the two options.

We have not dealt, for example, with the physical extension of rapid transit to replace the present form of commuter rail. With sufficient ridership, rapid transit may be the most economical form of transporting commuters for the following reasons:

- o Electricity could be used to propel the trains: a factor that could become very important in Ontario if petroleum fuel prices increased to high levels.
- o Replacement of the railways' labour agreements which are incompatible with the requirements of transit type traffic and, therefore, very costly.
- o Much higher utilization of the track through shorter headways.

It is Government's obligation to:

- o make a full economic assessment of the available options, i.e. of commuter rail, buses and rapid transit,
- o select a system that is the most economical in the long term,
- o provide assistance to an extent that is deemed reasonable.

Since the Government of Ontario has the constitutional responsibility for financing the road option, it is logical that the same level of Government

should have a significant role in this sector of transportation regardless of the option finally adopted.

However, since national objectives, such as energy conservation or the environmental improvement of Toronto, one of Canada's greatest tourist attractions, are also served by Toronto's commuter rail services, there is a place for Federal Government role in the support of commuter rail operations. Similar arguments can be made for municipal Government participation.

Rail Transportation of Captive Bulk Commodities

For all practical purposes, the transportation of bulk materials in large volumes is a captive traffic that could not be lost to another mode of transport for reasons of costs. This traffic can only be lost entirely if the commodities were to be priced out of the market through high railway rates.

For example, the transportation of coal from Alberta to Ontario Hydro's Nanticoke plant by rail and ship, with transfer at Thunder Bay, has been priced in consideration of the alternative supply: imports of U.S. coal from Pennsylvania. Ontario Hydro's planners weighed delivered prices against the issue of security of supply and quality of coal, and negotiated a suitable rail rate. This rate was probably the maximum that the railways could achieve under the circumstances, which was consistent with the principle of commercial freedom.

In theory, transportation by slurry pipeline may also influence railway pricing: if rates were too high a pipeline may be built and the railway may lose traffic to it.

In practical terms, however, this possibility is not a serious threat to the railways. A pipeline requires the commitment of very large capital funds. If the railways' variable costs are significantly below the total costs of

pipeline transportation, all the railways would have to do is charge high rates as long as there was no competition from the pipeline and then conveniently drop their rates below the minimum rate that the pipeline could afford once it has begun operation. Thus, the only ways in which a slurry pipeline could be built is through ownership ties or through guarantees that could prove to be costly in the light of competitive rail rates offered in the future. Investors are often reluctant to commit large funds to a mode of transport that has higher fixed costs than the variable costs of a competing mode. Thus, it is probably appropriate to dismiss slurry pipeline transportation as a practical factor in railway rate setting.

There are many examples in Western Canada that are similar to the Alberta-Ontario coal traffic. Railway rates for coal transportation are determined by the railways after careful evaluation of the markets including, for example, direct consultation with Japanese buyers of Canadian coal. The railways are quite aware of the rates that they can charge without jeopardizing the volume and they do exactly that. Under the provisions of the National Transportation Act, the railways have the freedom to charge any rate up to 2.5 times variable costs. (As the minimum, they have to charge their variable costs with the exception of the transportation of grain, which is explicitly exempted by the Act.)

Considering our previous finding that the rail transportation of bulk commodities is in the public interest, is there any justification or need for Government involvement to protect that interest?

In the example closest to home, the transportation of coal to Thunder Bay, there seems to be no need at the present time for any Government intervention. Ontario Hydro and the railways, after long negotiations, finally came to a mutually acceptable agreement in a commercial environment influenced by normal market forces.

There appears to be no need for Government involvement in this particular example since at the present, the public interest is not in jeopardy.

In more general terms, the question may be asked whether Governments have a duty to become involved in the provision of services that are considered to be of vital public interest only to prevent a potential or hypothetical situation in which a carrier may not provide the service required by the public interest? Is that fear justified in an economic system that so far, has functioned quite satisfactorily under commercial freedom?

Opinions on this matter are necessarily subjective. However, it may be worthwhile to make a few relevant observations which can be regarded as the subjective views of the author:

- o The largest telephone companies in Canada, including the largest in Ontario, are privately owned. The only involvement of Government with these companies is the broad regulation of rates on the basis of total Company profits. Trans-Canada rates are not regulated at all. Telephone subscribers are completely captive with no access to competition. Yet, telephone service is available everywhere at a high level of convenience and at a cost that has escalated by less than 40 percent in the past twenty years while the costs of other services tripled.
- o Conversely, the Post Office, which is not only controlled but owned and operated by Government, completely failed to live up to its obligations to the public. Thus, provision of a service by Government is not in itself a guarantee for better service than that provided by the private sector.
- o CN Rail is a Government-owned Crown Corporation. Its objective is to be managed in the same way as a private company with the same profit objective. If an emergency situation developed in which the security of rail service was endangered the Federal Government should, in theory, be able to use its powers to force its Crown

Corporation to act in the interest of the public; if it could not do that, there would be no justification for Government to own CN Rail. The opinion is often voiced that one of the principal reasons for Governments to run businesses is to safeguard the public interest.

- o The transportation of Western Canadian grain has encountered serious problems allegedly resulting from the railways' failure to provide sufficient service. Complaints from grain producers have been equally directed towards CP and CN. It appears, therefore, that Federal Government ownership of CN had no impact on that carrier's attitude towards serving an important national objective.

These examples may indicate that Government involvement for the sake of preventing inadequate performance by a carrier is not necessarily effective.

Government may be more effective in a positive way by contributing to the improvement of service in freight transportation. This is particularly true if the improvement implies a benefit to the public at large and, therefore, there is justification for public participation in the costs.

An example of potential positive government role in the bulk transportation sector is that of mineral aggregates (sand, gravel, and crushed stone). These commodities are among the few bulk materials that are transported in very large quantities by truck. The reasons why trucks can compete with railways in transporting aggregates are the short delivery distances that prevail in Ontario.

Aggregate trucks are notorious for severely disturbing the environment of several communities in Ontario by causing noise, dust, traffic hazards, congestion and damages to other vehicles.

Whereas in many cases, the construction of road by-passes, road widenings and other improvements could alleviate the problems, in some cases it may be

found more expedient to revitalize the transportation of aggregates by rail which, some time ago, was more predominant than today. This could only be achieved with Government assistance, since over short distances rail transportation is no longer competitive with today's large efficient trucks.

The justification for a positive Government role in this example would be the improvement of the environment which is a public objective.

Some people may argue that the users of aggregates should pay the costs of environmental protection since it is their consumption of aggregates that is responsible for the damages. However, this approach would be impractical because various aggregate producers are faced with various degrees of environmental problems and if they had to pay the costs of improvements themselves, some producers could simply not compete with others who, by virtue of their location, would not have to face environmental problems. This situation would soon result in a shortage of mineral aggregates. Thus, Government assistance to the railways for providing a service that is competitive with trucks may be justified at certain locations. Another Provincial Government role would be the consideration of the alternative solution: the construction or improvement of road facilities, which is clearly a Provincial responsibility.

4. THE CHANGING TRANSPORTATION ENVIRONMENT AND THE CHANGING ROLE OF GOVERNMENT

Several changes have occurred in the past decades that had significant impacts on transportation and on the Governments' role in transportation. Apart from improvements in railway technology, the following changes are discussed here:

- o Growing public sentiment against monopolies in all industries.
- o Inflation causing the Crow's Nest Pass rates to be increasingly unrealistic.
- o Air transportation replacing long distance rail passenger transport.
- o The National Transportation Act and Bill C-33.
- o Aggressive implementation of rail policies based on profit objectives vis-a-vis freight transportation.
- o Increased awareness of environmental concerns.
- o Soaring prices and dwindling supplies of petroleum fuels.
- o Growing reluctance of Government and the railways to make capital investments in the transportation infrastructure.
- o A general trend in public attitudes to tolerate lower levels of service.

Growing Public Sentiment Against Monopolies

Before the turn of the century, railways had a virtual monopoly in transportation in all areas that had no access to water. In those times,

exploitation of the producer was the order of the day: the railways considered the market price of a commodity and charged a rate that left the producer not much more than what he needed for a minimum standard of living. The producer was completely at the mercy of the railways.

Competition among the railways did not cure this situation because entering into the business was costly and it was more profitable for a railway to move into a new territory rather than trying to compete with an existing line.

In Canada, the Crow's Nest Pass rates guaranteed a reasonable return to the farmer on wheat; these rates were negotiated by the Federal Government with Canadian Pacific just before the turn of the century in exchange for Crown land. However, the original railway approach to pricing still continued for many other commodities.

The pricing philosophy of the railways has not changed to this day. The railways claim that there is no contradiction between their approach and normal pricing policies for any commodity or service in a system of free enterprise.

However, there is an important difference; that is the lack of competition in the railways' case as opposed to the price-controlling effects of bargaining and negotiations in the free market.

As a result, the relations between the railways and the producers have deteriorated over time, as the producers felt captive to the railways' decisions with little opportunity for negotiation. Frustration gradually turned into suspicion and prejudice against the railways that became almost engrained in tradition in certain parts of the country.

Over the years, new modes of transport appeared on the scene: first automobile and truck transportation, then air transport and finally,

pipelines. Railways lost much of their formally captive traffic. They now had to compete with other modes of transport but still not with each other. Competition kept many of the rail rates at reasonable levels. However, for those commodities for which competition from other modes was not serious, the old railway pricing philosophy has continued to prevail.

At the root of the dissatisfaction with the railways has been the reluctance of people to accept their pricing philosophy. Although most people do not question the superiority of the free enterprise and market pricing system, it appears that most people refuse to accept that these principles also apply to so-called "natural monopolies". This is consistent with people's disapproval of monopolies in the economic order that became predominant since the Depression and resulted in such public reaction as anti-combine legislations. Captive shippers do not like to be pushed around by the providers of services that are forced upon them for lack of alternative options. The shippers' frustration manifests itself in complaints and continuous calls for reform.

The railways are fighting an apparently unsuccessful battle for being accepted by the public as full fledged members of a competitive free enterprise system. It is a general perception that Canadian railways do not compete with each other by offering each others' customers better service or lower rates than those provided by the other railway. Railways do compete, however, with other modes of transport for certain types of traffic. Where such competition is not possible for economic reasons the railways are perceived as monopolies and, therefore, the public is reluctant to accept the principle of market pricing or "value of service" pricing as applicable to railways. There appears to be a basic feeling in people that in the case of captive traffic railway rates should be related to costs in a tighter manner than allowed by the National Transportation Act.

The conflict is between this public view and the railways' contention that a shipper who derives larger profits from a commodity than others should share some of that profit with the transporting carrier in the form of higher rates. This conflict between the public and the railways' view persists and

is giving rise to many complaints, especially in Western Canada where most of the captive commodities originate.

The Provincial Governments in Western Canada are advocates of the complaints on behalf of their constituents. They also claim that certain rail rates discriminate against particular economic or population sectors in favour of others. Some of the complaints imply that some sinister conspiracy exists between the management of the railways and specific business groups domiciled in Eastern Canada and that rates are controlled by these rather than by market economics and through negotiations.

As noted, the suspicion of collusion also extends to CN Rail, the federally-owned crown corporation that is not responsible to any shareholders or "business groups". The word "discrimination" has been used widely but always in a general sense. No attempt has been made to explain why a railway would want to discriminate against one group of customers in favour of another, nor has a comprehensive list of examples been made public that would clearly indicate the ways in which a group of customers has been favoured at the expense of others.

One example often mentioned in publications and speeches is the transportation rate of steel from Ontario to Alberta which has been higher than the rate from Ontario to British Columbia; however, even if there were "discrimination" in this particular case, it would be between two Western provinces and would not prove the alleged discrimination between Western and Eastern Canada. In fact, the rate differential for steel between Calgary and Vancouver was the result of simple market pricing: the price of Japanese steel that was higher in Calgary than in Vancouver has been the benchmark against which the delivered price of Canadian steel was measured.

Exhibit 1 indicates that the major railways did not make exorbitant profits in 1977 and 1978. A return of 3 percent on investment for a Crown Corporation (CN) and 9 to 10 percent before income taxes for a private company (CP) is rather low, considering that C.P. Limited's average

EXHIBIT 1RAILWAYS' RETURN ON INVESTMENT
(million \$)

	<u>1977</u>		<u>1978</u>	
	<u>CN</u>	<u>CP</u>	<u>CN</u>	<u>CP</u>
INVESTMENT IN PROPERTIES LESS DEPRECIATION RESERVES:	3250	1558	3389	1636
NET INCOME BEFORE INCOME TAX:	96	148	101	168
RETURN ON INVESTMENT:	3.0%	9.5%	3.0%	10.3%
NET INCOME WITHOUT SUBSIDIES:	(129)	50	(137)	67
NET INCOME WITHOUT GRAIN LOSSES: ¹⁾	149	241		
RETURN ON INVESTMENT:	4.6%	15.5%		
NET INCOME WITHOUT PASSENGER LOSSES:	158	159		
RETURN ON INVESTMENT:	4.9%	10.2%		
NET INCOME WITHOUT PASSENGER AND GRAIN LOSSES:	213	252		
RETURN ON INVESTMENT:	6.5%	16.2%		

Source: Statistics Canada publication #52-208.
CTC Annual Report

- 1) Estimates made by Peat, Marwick and Partners, using information published in the Report of the Commission on the Costs of Transporting Grain by Rail. - October, 1976

(corporate) return has been close to 20 percent. Thus, the fact that railways do have a virtual monopoly certainly does not show in their results, not even if their losses from statutory obligations were eliminated. (That would have increased their returns to 6.5 and 16.2% respectively).

The Governments' role in responding to the public's dissatisfaction with railway rates for captive freight traffic would be a monitoring function to enable the Government to verify cases of alleged discrimination.

Although not empowered to regulate freight rates, a monitoring of rail rates and rate increases could serve the same useful function as other price monitoring services provided by such Government agencies as the Ministry of Consumer and Corporate Affairs. If similar services were offered by, say, the Ministry of Transportation and Communications, the public could rely on a powerful ally in its dealings with the railways regarding "captive" freight rates, thereby establishing a form of "balance of power" in its negotiations.

Crow's Nest Pass Rates

The Crow's Nest Pass rates were fixed more than 80 years ago. They apply to the transportation of wheat and other grains from Western Canada at a statutory rate of approximately 1/2 cents per ton-mile.

Inflation has made this rate completely unrealistic. Whereas a decade ago there could still have been some argument that the railways could actually transport grain from their main lines at a cost below that rate, due to the rapid inflation since 1970 the railways' losses on grain traffic skyrocketed. The difference between the railways' grain transportation costs and revenues must be recovered from other traffic.

The significant increase in grain transportation losses, caused primarily by the inflation of costs and the fixed amount of the rates, warrants a reform of the subsidy system for grain transportation. There is little doubt that such subsidies are needed to keep Canadian grain competitive in world markets

and at the same time, secure a stable income for the Canadian farmers. But it would be better to pay the subsidy in a more direct form than at present. It would also be better if the railways received financial incentives for the efficient transportation of grain, replacing the present situation in which it is in the railways' financial interest to carry as little grain as possible. Since the railways have no choice with respect to the amount of grain they have to carry, they give grain traffic a low priority in order to reduce their costs. The railways' statutory obligation is to provide the service, but the manner in which it is provided is not described by law.

Shippers across the country have an interest in the ways in which the system of grain transportation subsidies would be changed. Users of rail services cannot see why they should contribute to the subsidies in an indirect way by having to pay higher rates to the railways, while users of truck transportation do not pay any part of the subsidy. The question can be asked in a more general way: why should the users of transportation services contribute to the subsidies at all? The provisions of the National Transportation Act that put the burden of transfer payments on the users of transportation are very unusual, since no benefits, direct or indirect, accrue to the shippers as the result of the Crow's Nest Pass rates. For that reason there has been constant pressure on the Federal Government to change the present arrangements and pay direct transportation subsidies to the farmers from general revenues.

On the basis of information published in the Snavely Report and other sources, it is estimated that in 1977 the railways paid out about 150 million dollars to cover their losses on grain transportation after the receipt of all branch line subsidies. This was approximately 5 percent of their total revenues. Thus, if another arrangement had been in force to subsidize the grain producers and if the railways had passed on their savings to the shippers, all rail rates across the country could have been approximately 5 percent lower.

However, there is absolutely no guarantee that the railways would pass on any

cost savings to their customers. When services are priced under commercial freedom, freight rates are determined by competition and by the ability of the market to pay the charges. There is no reason to believe that freight rates would not remain the same after the Crow's Nest Pass rates had been abolished. In that case, the railways' profits would increase to almost twice their present level. According to the data shown in Exhibit 1, the rates of return on the railways' investment would, in that case, still not be out of line with those of other businesses.

It can be assumed, however, that even if the rates didn't change, the railways would spend a substantial part of their increased earnings on the improvement of capital plant which would eventually, benefit the users of rail services.

In summary, it is reasonable to suggest that the "user pay" principle, according to which the users should pay as much of the true costs of services as possible, should also apply in reverse: the users of transportation should not pay for expenses that have nothing to do with the service that they are using. The subsidization of grain transportation does not appear to be in line with the "user pay" principle.

Passenger Transportation

It is probably safe to say that technology has caused some of the most significant changes in rail passenger transportation. Although there may be a sentimental tendency in people to delay its decline, eventually rail passenger transportation is likely to be limited to:

- o short haul high density services, particularly suited to the rail mode,
- o access to communities in northern areas with limited road facilities.

The reasons for the decline in rail transportation has been the rapid improvement in air transportation technology and the continuous increase in airline productivity that resulted in the reduction of real air fares and, at the same time, an increase in the quality of service and in the speed of air travel.

Under complete commercial freedom most rail passenger services, if not all, would have disappeared under the competitive pressures of air transportation on long trips and of bus and automobile transportation on short trips. However, as the result of Government intervention, supported by the National Transportation Act, passenger services continued at substantial losses. According to the law, 20 percent of the losses had to be borne by the railways. The participation of the railways in the losses was supposed to provide an incentive for improving efficiency. However, instead of improving their efficiency, the railways reduced their losses through a deplorable reduction in the quality of service.

The formation of VIA Rail freed the railways from participation in the losses resulting from passenger transportation. However, the railway can still not derive a profit from carrying passengers and are not allowed to charge VIA more for operating their passenger trains than the variable costs defined by Costing Order R-6313.

The definition of "variable costs" implies that if the railways stopped carrying passengers their costs would be reduced exactly by that amount; since their revenues are also equal to that amount, the railways' financial situation would, at least theoretically, not change if they did not carry passengers. (1) Therefore there is little incentive for the railways to provide operating services for VIA Rail, and they only provide them because that was the condition under which they were freed from their passenger transportation losses.

Thus, passenger transportation by the railways today is a true public service. However, since the rules do not allow them to derive any profits

(1) The extent to which the calculation of variable cost follows Costing Order R-6313 is not known, since the railways do not provide any details of pricing to VIA.

from it, the railways are not interested in increasing passenger traffic, and hence, competition from another service or mode of transport would have no effect on the quality of service provided by the railways to VIA Rail.

The Management of VIA Rail is presently more interested than the railways in the quality of service and growing passenger volumes. However, because of the limited history of VIA it is too early to say whether VIA's Management will be judged by the quality of service and growth in passenger volumes or by the amount of subsidy per passenger-kilometre. In the former case, competition would improve VIA's service and reduce its rates, but at a high cost to the taxpayer. In the latter case, little would change from the situation that existed before VIA.

It is the Federal Government's role to strike a balance between the conflicting criteria by which VIA's management may be measured.

The National Transportation Act and Bill C-33

The National Transportation Act of 1967 has been a fundamental document that defined the objectives of transportation and the role of Government. Section 3 of the Act is reproduced in Appendix A: it declares that "economical, efficient transportation at the lowest possible cost is essential to protect the interests of the users of transportation and to maintain the economic wellbeing and growth of Canada". It also states that these objectives are most likely to be achieved when all modes of transport are able to compete and that regulations shall not be an impediment to competition.

Basically, the Act advocates commercial freedom to the extent that such

freedom does not jeopardize the public interest. Its shortcoming is probably the failure to prescribe a practical procedure for examining and protecting the public interest in the cases of captive rail traffic. There are provisions in the Act by which a shipper can apply for the reduction of a high rail rate if he feels that it violates the public interest. However, the procedures to prove this, and to carry the case through hearings, is so cumbersome and costly that most would-be applicants shy away from the process. Only seven or eight applications were made for the reduction of rail rates in thirteen years, and they took years to be resolved.

Another deficiency of the Act is the manner in which grain transportation is treated, being inconsistent with the Act's principle that there should be no cross-subsidization between transportation sectors.

Apart from these, the Act has contributed to an efficient transportation system in Canada and provided a choice of services to shippers at prices that do not appear to have been obstacles to economic growth. In the meantime, the costs of transportation services decreased steadily in real terms; whereas transportation has remained an approximately constant 6 percent of the Gross National Product in terms of real output (in 1971 constant dollars) current expenditures on transportation decreased from 8 percent of the GNP in 1946 to 5.5 percent in 1976, indicating an improvement of 30 percent in the productivity of transportation relative to the rest of the economy.

It was therefore rather surprising many years ago to hear a Federal Minister of Transport make a statement that Canadian transportation "is in a mess". This statement was probably not meant in earnest and certainly puzzled the Canadian carriers and shippers who may have often been at odds with each other at the negotiating table, but appeared to agree on one fact: that the National Transportation Act has been a piece of legislation that benefitted the shippers as well as the carriers.

The only obvious "mess" in transportation has been the unsatisfactory movement of grain for the reasons discussed, and the deterioration of rail

passenger services that have since undergone a major re-organization.

A further surprise was the drafting of Bill C-33 to amend the National Transportation Act; it had its first reading in Parliament in January 1977. "Amendment" was an understatement: Bill C-33 completely re-stated the objective of transportation in Canada. It repealed Section 3 of the National Transportation Act (see Appendix A) and stated instead that the objective of a transportation policy for Canada was to achieve a transportation system that:

- (a) is efficient,
- (b) is an effective instrument to support the achievement of national and social and economic objectives, and
- (c) provides accessibility and equity of treatment for users.

The Bill also declared that achievement of the objectives of the transportation policy for Canada requires the integration of services employing the most appropriate modes for each service, and that it is the responsibility of governments to attend to the provision of the transportation system.

Thus, among the major objectives of transportation, there was no mention of competition: in fact, integration of services was advocated. Instead of commercial freedom, the Bill stated that transportation should be an instrument of social and economic objectives and, accordingly, emphasized a strong role for Government in overseeing transportation.

The Bill came under attack from many corners and was never passed. There has been concern about potential conflicts between the efficiency of transportation and the use of transportation as an instrument of national or regional policy and how such conflicts would be resolved. It was also unclear what was meant by the phrase "responsibility of Government to attend to the provision of the transportation system".

Probably the main problem of the Bill was that it made transportation subordinate to an objective of a higher order, i.e. regional development, instead of declaring that efficient transportation is in the public interest and is the primary goal in a country so dependent on transportation.

Rail Policies Based on Profit Objectives

In line with the policies of competition and commercial freedom reflected in the National Transportation Act, CN Rail embarked on an aggressive implementation of policies based on profit objectives in the freight transportation sector.

Whereas CP Rail has always been operated with the profit objectives of private enterprise, these objectives were not explicitly announced in the case of CN Rail. In recent years, the policies of the Federal Government and of CN Rail have made it clear that CN Rail will be run on the same basis as any private company.

This change may have an indirect impact on CP Rail's policies too. Whereas previously, Canadian Pacific and its subsidiaries derived some political advantage from the fact that CP Rail was not making very much profit, this is no longer a "virtue" in the light of CN Rail's new policy of commercial profitability.

In the case of the VIA Rail, it is meaningless to speak about "profit" since VIA derives about two-thirds of its revenue from public funds and all of its assets have been created through Government funding. Thus, VIA's financial objectives are rather similar to those of a Government department to perform the budgeted activities for the budgeted funds or for less.

Environmental Concerns

For generations, environmental concerns had a much lower priority among public and private objectives than today. The recent change in public

attitudes has two consequences:

- o funds are today more readily available for the improvement of the environment than before, and
- o it is often difficult to build transportation facilities that are necessary for the provision of adequate service, because they infringe on the environment of local communities.

Since the protection and improvement of the environment is a public concern, Government has obviously major roles in ensuring a balance between these concerns and the availability of new transportation facilities where needed.

An example of a potential role of Government in the improvement of the environment through involvement in transportation has been described in Section 3.

Conservation of Petroleum Fuels

The decrease in the production of crude oil in Canada and high world oil prices represent a substantial change in the economy that impacts on transportation, perhaps more significantly than on most other economic sectors.

The conservation of oil resources is a public objective that requires Government intervention in many sectors of the economy since the private sector cannot take into consideration the public good to the same extent as Government.

So far, Governments in North America have achieved relatively little in bringing their countries closer to self-sufficiency in oil. It is predictable that we shall witness more active Government intervention in the near future, especially if some major event occurred in the Middle East.

Considering the political instability in many Middle East countries, the probability of such events is quite high.

Rail transportation, being the potentially most fuel-efficient land transportation mode if operated with the objective of fuel conservation, will have a vital role if the availability of petroleum fuels were curtailed. Even without such curtailment, Governments must give railways a more important role in their long range fuel conservation plans since there is no other transportation mode that provides a similar opportunity for a potential reduction in petroleum fuel consumption.

Section 8 deals specifically with the subject of energy conservation.

Reluctance Toward Investment and Changing Public Attitudes Toward Service Levels

There has been a noticeable trend in recent years toward a reduction of slack capacity in both the public and the private sector.

The reluctance of investment has been partly caused by high inflation rates associated with high interest rates. Because of these, the owner of a new facility finds it difficult to compete with an owner of an old facility. Furthermore, new investment in plant for the expansion of capacity causes such increases in costs that the owners of a plant would rather try to increase the utilization of the existing facilities than expand their capacity. This almost always leads to poorer service levels as the slack in the system decreases.

There are several examples for such trends occurring in the transportation sector. Railways are increasingly reluctant to buy cars and prefer to leave that to their customers. The same policy applies sometimes to locomotives and cargo handling facilities.

Investment always implies an element of risk. Through their reluctance

toward investment, the railways are trying to shift as much of the risk to their customers as possible. This attitude is inconsistent with the railways' objective of achieving the same levels of profit as other commercial enterprises, yet when it comes to new investment, they rather rely on their customers or on Governments to provide the funds.

It appears that the public is rather complacent with the reduction in service levels resulting from the reduction in slack capacity. Growing waiting lines and delays in service do not appear to give rise to too many public complaints. Recently, Ontario Hydro has been severely criticized by the public for providing too much slack capacity.

Governments must ensure a reasonable balance between the capacity of facilities and service levels since the public may not be aware of the serious loss of national productivity that can result from poor service levels in transportation. Governments must ensure the service standards that are the most cost-effective from a total economic point of view.

5. SERVICES THAT REQUIRE GOVERNMENT SUPPORT

Governments provide support to transportation in two basic ways:

- they build facilities, and
- they pay subsidies.

A substantial amount of research has been devoted to the question of Government contributions to transportation and distinction has been made between financial support provided in the form of building facilities, i.e. contributing to the "infrastructure", and the payment of subsidies, either directly or by absorbing the losses of Crown Corporations.

Considerable efforts have been devoted to separate any Government support provided to the infrastructure of transportation systems from operating subsidies. One of the reasons for this distinction has been the railways' claim that they have to maintain their own infrastructure whereas all the other modes use facilities provided by Government. Whereas this statement is true, it is felt that the distinction is of probably little consequence, since the technology of the various modes of transport are completely different. A substantial part of the "infrastructure" for air and water transportation is free: there are no highways in the air or on the ocean. At the other end of the scale, railways require an extremely elaborate infrastructure that is costly to build and maintain; however, once it is there, it makes it possible to operate on it at a relatively lower cost than the costs that other modes are able to accomplish.

A more meaningful indicator is the total amount of funds spent by Governments on the various transportation sectors.

Certain rules must be applied to the presentation of such data to ensure consistency. For example, in order to compare Government spending with that of the carriers, a cost of capital has to be assumed for Government. Government fiscal data usually mix capital expenditures in a particular year

with operating expenses, i.e. a Government capital investment is fully depreciated at the moment it is made. Zis Haritos of the Canadian Transport Commission has devoted a substantial amount of work to this issue and produced several reports and papers on the subject; he concluded that to develop meaningful figures, a notional cost of money should be assigned to Government investment; he used 6 percent in most of his work. He also concluded that sales taxes should not be considered Government revenue related to the transportation service, but all direct user charges and all taxes unique to transportation, such as transportation fuel taxes, or the air transport tax, should be included in the calculations as revenue.

The total Government expenditures and revenues in the various transportation sectors are shown for 1975 in Exhibit 2. Federal, Provincial and municipal expenditures and revenues are combined. Most of the expenditures for the air, marine and rail modes are Federal, expenditures for roads are Provincial or municipal, and road revenues are Provincial.

It is difficult to define an "equitable" method for determining which transportation modes receive relatively greater or smaller support from Government. A possible approach is to determine the total amount spent by the users of a particular mode and to examine how much more they would have spent if there had been no Government support.

Exhibit 3 shows the revenues and costs of railway operations for CN and CP. For rail freight transportation, other than statutory grains, the subsidies received by the railways from the Federal Government to compensate them for their losses on unprotected branch lines and the "at and East" eastbound grain and flour subsidies are less than the railways' losses resulting from the Crows Nest Pass rates. The latter amounted to \$147 million in 1977 against freight subsidies of \$32 million. It can thus be said that in total the railways receive a negative subsidy for freight transportation; in other words, the railways are subsidizing the grain producers in Western Canada. As shown in Exhibit 3, the Government's subsidy to Western grain transportation was only \$94 million against the \$147 million "subsidy" put up by the

EXHIBIT 2

GOVERNMENT SUPPORT TO
TRANSPORTATION
(All Levels of Government)

(million \$)

1975

	<u>Infrastructure</u>		
	<u>Air</u>	<u>Marine</u>	<u>Road</u>
Annual Revenues	192	122	2805
Gov't Support	<u>324</u>	<u>599</u>	<u>1991</u>
Costs	516	721	4796
% Recovery	37%	17%	58%

Source: "Transportation: A National and Regional Perspective"
Transport Canada Discussion Paper for the First
Minister's Conference on the Economy, Nov. 27-29, 1978.

NOTE: 1975 figures are latest available. Data developed as
part of special studies by the Canadian Transport
Commission.

EXHIBIT 3RAILWAY REVENUES AND COSTS

(million \$)

1977

CN AND CP

	<u>Freight Excl. St'ry Grain</u>	<u>Statutory Grain²⁾</u>	<u>Passenger</u>	<u>Total</u>
Annual Revenues	2629	98	109	2836
Gov't Support	32	94	199	325
Internal Transfers	(221)	147	74	-
Annual Costs ¹⁾	<u>(2196)</u>	<u>(339)</u>	<u>(382)</u>	<u>(2917)</u>
Profit (loss) before income tax	244	-	-	244

1) Excluding income tax

2) Estimated

Source: Railway Annual Reports, except where noted.
CTC Annual Report.

railways themselves (financed from other traffic revenues).

Passenger transportation subsidies amounted to \$199 million in 1977. In total, the subsidies accounted for \$325 million and the railways transferred \$221 million from their general freight revenues to cover their portion of the grain and passenger losses.

The subsidies related to rail passenger transportation are shown in Exhibit 4, for the years 1977 and 1979 for CN, CP and VIA Rail.

It is interesting to note that, considering inflationary increases in railway costs between 1977 and 1979 there has been relatively little change in the total balance of revenues and costs between the times before and after the formation of VIA Rail. Since VIA rationalized some service in 1979, the resulting savings were either cancelled by the costs of services improvements or the railways are charging VIA more than their previous approved variable costs for the equivalent service.

The passenger transportation costs and revenues per passenger-km are summarized in Exhibit 5 for bus, rail, air passenger car transportation. As shown, passengers paid for approximately 30 percent of the total transportation costs in the rail mode. They paid 75 percent in the air mode.

It is very difficult to make an equivalent estimate for the automobile mode since it would not be fair to include urban transportation in a comparison with inter-city modes. An estimate of 1 cent per passenger km net Government expenditure is estimated to be in the right order of magnitude if only highway traffic was considered. With that assumption, the percentage of costs paid by a passenger travelling by private automobile would be about 83% of the total cost.

According to several reports buses pay fully for the facilities they use.

EXHIBIT 4

RAIL PASSENGER TRANSPORTATION
COSTS AND REVENUES
(millions of dollars)
1977 and 1979

	<u>CN</u>	<u>CP</u>	<u>VIA</u>	<u>TOTAL</u>	
<u>1977</u>					
Revenues	88.2	21.0	-	109.2	28.6%
Government payments	161.2	38.1	-	199.3	52.2%
Railway losses	<u>62.6</u>	<u>10.6</u>	-	<u>73.2</u>	<u>19.2%</u>
Costs	302.0	69.7		381.7	100 %
<u>1979</u>					
Revenues	17.9		103.8	121.7	30.4%
Government payments	35.6		231.8	267.4	66.9%
Railway losses ¹⁾	<u>11.0</u>		<u>(0.4)</u>	<u>10.6</u>	<u>2.7%</u>
Costs	64.5		335.2	399.7	100%

1) Railways have been compensated
for all losses, after April 1, 1979
only.

Source: Railway Annual Reports.
Statistics Canada publication #52-208.

EXHIBIT 5PASSENGER TRANSPORTATION
FARES AND COSTSC A N A D A
1977

(Trips over 150 km one way)

	<u>BUS</u>	<u>RAIL</u>	<u>AIR</u>	<u>AUTO</u> ¹⁾
PASSENGER-KILOMETRES (billions)	<u>4.0</u>	<u>2.6</u> ²⁾	<u>26.7</u> ³⁾	<u>50.0</u>
FARE ¢/KILOMETRE	3.1	4.2	5.1	5.0 ⁴⁾
GOVERNMENT CONTRIBUTION ¢/KILOMETRE	<u>0.0</u>	<u>10.2</u>	<u>1.7</u>	<u>1.0</u>
COST ¢/KILOMETRE	3.1	14.4	6.8	6.0
% RECOVERY	100%	29%	75%	83%

1) Broad estimates, based on 2 persons/car

2) CN and CP

3) Air Canada and CP Air

4) Driver's expenditure

Source: Carrier annual reports and calculations by
Peat, Marwick and Partners.

Extrapolation to 1977 based on:

1. "An Interim Report on Inter-City Passenger Movement in Canada"
June 1975, Transport Canada.
2. "Technology and Productivity in Passenger Transportation",
September 1975, Transport Canada.

It was not possible to arrive at similar figures for the marine mode since most of the marine traffic is international and no data are available on the total expenditures of shippers by that mode.

It can be concluded that in rail transportation, only the passenger mode requires subsidies. However, the subsidies required for this sector are very large in comparison with recoverable costs.

A study of 1972 passenger fares and subsidies showed that a one-way airline ticket between Toronto and Vancouver cost \$133, a rail coach ticket \$95.

The Government's contribution to the passenger's air trip was estimated to be \$44. The loss on the rail trip was \$202.

The total cost of the air trip was therefore, \$177, and of the rail trip \$297: a difference of \$120 in favour of the air trip.

Further to the cost difference, a railway trip would last 3 days, as opposed to 5 hours for the air trip. The passenger would have to eat during the trip, and if he or she used sleeping accommodations on the train, the costs would be even higher than shown.

The passenger also lost three days of his or her vacation or working time.

Is it legitimate to search for a reason why the Government is subsidizing a transportation service that costs substantially more and is less convenient than the service offered by a more efficient competing mode? Is it believable that a passenger would spend three days on a train instead of 5 hours on a plane to save \$38 which he or she is likely to spend for meals and other expenses during the trip anyway?

In search for an answer to this question the suggestion may be made that perhaps the reason for long rail trips is not only the transportation from one point to the other but the trip itself. It is possible that the rail trip itself becomes the entertainment or recreation the passenger is looking

for. If that is the case, the expenditure of Government is no longer subsidy to transportation but rather a subsidy to recreation and should be judged in that light.

The other possible answer to the puzzle is that in fact there are hardly any long distance passengers on the trans-continental train and that most passengers travel to and from small intermediate towns to the nearest large city.

The conclusions that can be drawn from the 1972 data in relation to short haul transportation are different. The air fare between Toronto and Montreal was \$30 and the estimated Government contribution to that trip was \$10. The rail coach fare was \$19 and the losses on the trip were \$10. Thus, if Government paid for all the losses, the contributions of Government to the Toronto-Montreal trip would have been the same for both modes but the passengers would have paid substantially less for the rail mode.

Rail transportation on short hauls with heavy traffic can therefore be more economical than air transportation. It can also provide a high level of service without sacrificing economies.

However, when the traffic volume is smaller, such as between Toronto and Ottawa, rail transportation is no longer more economical. The 1972 air fare between Toronto and Ottawa was \$25 and Government contributed approximately \$8 for a total of \$33. The rail fare was \$17 plus a loss of \$19 for a total cost of \$36. Thus, rail transportation to Ottawa was less economical than air transportation, in spite of the fact that the level of rail service was "cut to the bones".

For comparison, the number of passengers between Toronto and Montreal was approximately 1.2 million as opposed to the Toronto-Ottawa volume of 170,000, including part-of-the-route passengers.

It can be concluded that the key to efficient rail passenger transportation is passenger volume.

Subsidies granted one transportation mode impact on other modes. The air mode is not seriously affected by rail passenger subsidies because the amount by which air fares are higher are, in most cases, amply compensated by the shorter travel time.

The bus mode could be affected to a greater extent by the rail subsidies. Since rail transportation is somewhat faster and substantially more comfortable than the bus mode, a subsidy that enables the railways to reduce their fares just slightly above the bus fare puts the bus service into a difficult competitive position. It is felt that the Federal Government would be justified in safeguarding the interest of the unsubsidized bus mode by not allowing VIA Rail to set their fares below a certain margin that would be related to the level of bus fares.

In summary, rail services that were found to require and fully justify Government support are:

- o Services for isolated communities, provided that the rail mode is the least costly method of transportation at equivalent levels of service.
- o Commuter rail services which, through subsidies, mitigate the disadvantages caused by the size of large cities.
- o Other short haul passenger rail services that do not require subsidies much in excess of the Government support provided to the competing modes of transport.
- o Transportation of grain.

The justification for Government support to long distance rail transportation is not quite clear, as discussed above. Direct support of grain transportation appears to be necessary, but the present cross-subsidization

provided by other railway users contradicts the "user pay" principle and has a serious negative effect on the efficiency of the total transportation system.

6. INVESTMENT OPPORTUNITIES FOR GOVERNMENT

The economy of Canada is based on the principle of private investment. Government usually makes investments if:

- the investment serves a public objective, and
- the expected return is too small or the perceived risk is too great to attract private investors.

A high return on investment is the award for the investor's initiative and courage: it is required to motivate him. Government is motivated by its desire to serve the public and therefore does not need such high rates of return as private enterprise.

Government nevertheless needs a return on investment since it invests the public's money and is obliged to obtain at least the same return as the average citizen could have obtained if he had not given his money to the Government. This rate is usually equal to the going interest rate on savings deposits, guaranteed bonds or certificates.

Thus, government financing can make capital-intensive projects feasible that would not be found feasible at the high rates of return expected by the private sector. In rail transportation such projects may be:

- construction and upgrading of tracks to increase capacity
- electrification of lines
- construction of new lines to serve the development of resources
- construction of terminals
- purchasing of rolling stock.

Government investment in such projects is justified if the projects serve a public objective such as:

- creating jobs in areas of unemployment by ensuring the viability of marginal industries or projects.
- improving the balance of payments through increased exports
- conserving petroleum fuels
- protecting the environment
- making a region more attractive to its residents and to tourists.

Examples of potential Government investment in railway lines are present plans by the B.C. Government to build some of the lines required to haul North-East B.C. coal to Prince Rupert for the Japanese market.

It should be noted that the high rail rates for the "captive" coal traffic determined by the application of free market principles contribute to high export costs of Canadian metallurgical coal. At the same time the same Japanese steel mills that buy the Canadian coal form consortia instead of competing with other Japanese firms in international markets and the Japanese Government gives them loans at extremely low interest rates so that they can turn their full attention to competing with foreign steel producers in those markets.

The success of this policy is evident from the amount of Japanese steel sold in North America. Since the Japanese Government that professes the same economic principles for domestic competition as Governments in Canada, participates actively in assisting exports, there appears to be full justification for Governments in Canada to do the same. One method of doing that is to reduce the interest rates on required new railway plant through

direct government investment.

Federal as well as Provincial levels of Governments may be involved in making such investments. The principle is applicable in all parts of Canada.

7. LEVELS OF GOVERNMENT INVOLVED IN THE SUPPORT OF TRANSPORTATION

At the present time the Government of Ontario supports automobile and truck traffic, sharing this support with the municipalities. The Ontario Government also supports commuter rail services as extensions of transit services. The Provincially owned Ontario Northland rail service is subsidized, mostly by the Provincial Government, but receives some funds from the Federal Government related to the former Nipissing Central Railway (Swastika-Norand service).

The Federal Government supports rail passenger service that is not operated by the Provinces and air transportation. There are no Federal ports in Ontario but the support of the St. Lawrence Seaway by the Federal Government impacts significantly on Ontario.

Two questions may be asked:

- o Should the Provincial Government assume more support of transportation services to gain additional benefits in the transportation sector?
- o Could the Federal Government take over some of the burdens that presently fall on the Provincial Government?

In answer to the first question it is necessary to ask an associated question: is there any impediment to transportation in Ontario that requires action? If so, there may be room for more Provincial involvement.

In freight transportation there have been no complaints of significance, although the present work of the Ontario Task Force on Provincial Rail Policy might have uncovered some problems.

In the area of passenger rail transportation there is room for improvement.

Firstly, commuter rail services could be significantly expanded to alleviate highway traffic and increase the mobility of people in the Toronto area. The Government of Ontario is already on top of this situation. However, the following questions may be raised:

- o CN Rail charges the Ontario Government commercial rates for operating the GO service that are presumably higher than variable costs. This is inconsistent with the railways' agreements related to other passenger services (with VIA Rail) that are provided at cost. Can the Federal Government provide assistance in strengthening the Province's negotiating power vis-a-vis CN's monopoly position? This subject is discussed in more detail in Section 7.
- o Should the Federal Government participate in the financing of commuter rail services together with the Provincial and perhaps municipal Governments?

To answer the question whether the Federal Government should take on a greater role in providing support for services presently supported entirely by the Province of Ontario, it would be necessary to look at the benefits derived by the country as a whole from an efficiently functioning large city such as Toronto. With many national and international companies having their head offices in Toronto it can be said that any improvements in the efficiency of businesses in Toronto provide benefits to more than just the local community or the Province. A "liveable" metropolis attracts not only tourists to the country but also raises the prestige of the country in the eyes of the world.

Cost sharing between the Provinces and the Federal Government with regards to commuter rail services is a matter of general interest to all Provinces and touches on the entire issue of Federal aid to urban transit systems. In the United States this aid is substantial.

The national objective of fuel conservation also justifies Federal aid to urban transit, especially if the Federal Government were to collect a substantial royalty on crude oil. Spending a certain part of those funds on such energy saving measures as the expansion of transit services would be one logical use for the funds.

Another area of possible improvement and innovation is the greater use of railway lines for recreational purposes. It was stated in the previous Section that many of the long distance rail trips are probably made for recreational purposes. Short haul rail trips in Ontario organized in ways similar to air charter packages, could be of great value to the residents of Ontario and, more importantly, to tourists visiting the Province. Perhaps the framework of the Ontario Northland railway could be used in cooperation with the two major railways, who could operate special Ontario Northland excursion trains in the same way as they operate regular traffic for that railway now.

However, to implement such schemes, the "rules" must be changed. VIA Rail could be regarded to be the equivalent of the scheduled carriers in air traffic and the special excursion trains the equivalents of charter flights. In principle there is nothing wrong for the two major railways to operate VIA's equipment in the form of scheduled services and both VIA and Ontario Northland excursion equipment for occasional "charter-like" trips.

8. THE PROVINCIAL GOVERNMENT -
A CUSTOMER OF THE RAILWAY

When a Provincial Government provides a rail service, such as the commuter rail service for Toronto, it becomes a customer of the railway. It is an unusual relationship because the fares are independent of the price that the Province is charged and, therefore, the traffic volume is not sensitive to price. This, coupled with the monopoly position of CN Rail, results in a situation in which there are virtually no natural economic constraints on the amount that CN can charge.

The contract between the Ontario Government and CN Rail for operating the GO service has thus been the result of negotiations in which CN Rail had a rather strong position.

As we have seen, in most cases when rates are negotiated, there is an element of competition that influences the carrier in making its offer. For example, in the case of the Alberta-Ontario coal movement the influencing factor was potential competition from Pennsylvania. In the case of Western Canadian coal movements the competition came from other countries to which the ultimate customer, the Japanese steel industry, could turn if the delivered price of Canadian coal became too high.

In the case of passenger transportation there is no such competition. The passenger pays only a fraction of the total transportation cost as determined by policy; Government pays the difference.

Unless supported by regulation and/or legislation the Government's only negotiating lever is the possibility of not going ahead with the program at all and deprive the railway of a profitable business. However, such option may sometimes lack credibility as a practical alternative.

In the case of VIA Rail, the payments by VIA for the services performed by the railways are regulated: the railways are not supposed to receive more

than their proven variable costs as determined in accordance with Costing Order R-6313. Thus in principle, the railways operate VIA trains "at cost", as a public service. It was easy for the Federal Government to obtain the railways' agreement to this principle since previously they were required by law to carry passengers at a loss: the railways' choice was therefore to accept the principle of carrying passengers at cost or else carrying them at a loss as before.

The Ontario Government is not backed up by legislation that would determine the amounts that the railway charges TATOA, the Provincial agency, for operating the commuter trains and maintaining the rolling stock.

It would appear logical that the same rules that apply to the relations of the federally supported VIA service should also apply to Provincially operated passenger train services, since they all serve the public interest to a similar extent.

It is recognized that the Provinces have little leverage at the present to make the railways accept the same principles that govern VIA services or other Government-subsidized passenger services. Perhaps the Federal Government can lend a helping hand to the Province regarding this issue, since the Federal level of Government appears to be the only one that has a leverage with the major railways through its legislative and regulatory powers in several other areas of rail operations.

9. ENERGY CONSERVATION

Transportation of goods and passengers by rail, if carried out in an efficient manner, consumes substantially less energy than transportation by any other mode of land transport.

Thus, if Canadian fuel prices increased more strongly than in the past, the competitive position of the railways vis-a-vis the motor carriers would improve. In the case of passenger transportation the gap between rail and bus, or between rail and air transportation would narrow. This may not be significant for the long haul, where the gap would still be very large, but could be significant on high density short-haul links such as Windsor-Toronto-Montreal.

The existence of rail passenger services would become vital in an acute temporary fuel shortage situation. Under these circumstances, railways could carry many times more passengers with a given amount of fuel than any other mode of transport, especially since the load factors on the trains would be 100 percent after all the other transportation services have run out of fuel.

The contingency role of rail passenger transport under a potential petroleum fuel shortage should always be kept in mind when the question of preserving passenger rail traffic and equipment is considered.

The same can be said about freight equipment; during an acute petroleum shortage the demand for extra railway cars would probably rise to saturation levels.

10. SUMMARY

1. Canada derives many advantages from its large land area but sometimes has to cope with problems resulting from its size. Because of the large distances, an inefficient transportation system can do more harm to Canada than to a smaller country. For that reason, improving the efficiency of transportation must have a high priority among the objectives of Government and industry.
2. Since the disadvantages of distance do not affect every sector of society and of the economy equally, there is a need for Government involvement to mitigate the most serious disadvantages.
3. The operation of railways is a service provided in the public interest. In the case of passenger services, the recognition of this role is expressed by the fact that the railways provide passenger services at cost. In the case of freight transportation, services provided in the public interest are those movements of bulk cargo that do not have any practical substitute method of transportation and which are therefore vital to the existence of certain industries or agricultural activities and of the people who depend on them.
4. Recent changes in the transportation environment that have affected roles of Governments have included:
 - o growing public sector sentiment against monopolies
 - o inflation causing the Crow's Nest Pass rates to be increasingly unrealistic
 - o air transportation practically relacing long distance rail passenger transport

- o as the result of competition from rail and road transport, rail passenger service being assigned a low priority by the railways
 - o The National Transportation Act that defined transportation objectives for Canada and the Provinces
 - o Aggressive implementation of rail policies based on profit objectives vis-a-vis freight transportation
 - o Increased awareness of environmental concerns
 - o Soaring prices and dwindling supplies of petroleum fuels
 - o Growing reluctance of Governments and the railways to make capital investments in the transportation infrastructure
 - o A general trend in public attitudes to tolerate lower levels of service.
5. When such changes occur, various public and private objectives often get into conflict. The role of Governments, including the Government of Ontario, is to ensure a balance among conflicting objectives.
6. The roles of the Provincial Government in rail transportation be identified as:
- o Safeguarding the public interest by ensuring the continuing availability of the vital rail services identified in Paragraph 4 at appropriate service levels.
 - o Acting as catalyst to encourage and help implement new rail services or improvements that are in the public interest and could

not be implemented by the private sector alone; services in the interest of reducing environmental disruption or of conserving energy are in this category and some examples were identified in the paper.

- o Monitoring freight rates and identifying cases of potential discrimination.
- o Acting as spokesman for the users of rail services and assisting them in their negotiations if the public interest is at stake.
- o Ensuring that service levels to the public are not unduly reduced as the result of reluctance by Governments or by the railways to expand facilities or because of a system that indirectly rewards poor service.
- o Provide financial assistance for the construction of railway plant or purchasing of equipment where broader public objectives are served by such assistance.

7. Government financing can make capital-intensive projects feasible that would not be found feasible at the high rates of return expected by the private sector. In rail transportation such projects may be:

- construction and upgrading of tracks to increase capacity
- electrification of lines
- construction of new lines serving the development of resources
- construction of terminals
- purchasing of rolling stock

Government investment in such projects is justified if the projects serve a public objective such as:

- creating jobs in areas of unemployment by ensuring the viability of marginal industries or projects
 - improving the balance of payments through increased exports
 - conserving petroleum fuels
 - protecting the environment, its residents and tourists
 - making a region more attractive to its residents and tourists.
8. Among the rail services that require Government support, the most prominent is the commuter rail transportation sector. Where passenger volumes are high, short haul rail services are requiring relatively little Government support, not much greater than the support provided to the air or automobile modes.
9. Commuter rail service requires more Government support to serve the public at affordable fares. Such service is necessary to maintain Toronto as a "liveable" city where people are able to work efficiently and enjoy their environment, and to make Toronto more attractive to the outside world. These are benefits accruing not only to Toronto and Ontario but also to Canada. This would justify Federal Government involvement in the support of commuter rail services in Ontario in addition to the existing involvement of the Provincial Government.
10. Expansion of commuter rail services would strongly contribute to the national objective of fuel conservation. If the Federal Government support of commuter rail services would be an effective use of those revenues.
11. The most appropriate method of commuter transportation for various commuter links depends on economics, considering all the costs of the system.

12. Government support to long haul rail services is disproportionately higher than the support given to other modes and its justification could be questioned. However, service on those portions of the trans-continental rail lines that are not well served by roads is still essential.
13. Whereas regulations require the railways to operate VIA trains at cost, these regulations do not apply to the operation of such Provincial passenger rail services as the GO services or the ONR. Because of the monopoly situation this results in high costs to the Province of Ontario. Since it is recognized that rail passenger transportation is a public service and is operated at cost throughout the country, it would be logical to apply the same principle to commuter rail services. Co-operation among Provinces and with the Federal Government would be required to solve this problem.
14. Innovations such as chartered tourist trains operated by major railways next to VIA services could be considered for Ontario and other Provinces. The suggested system would be similar to the system of scheduled and chartered air carriers operating side by side.
15. Railway freight transportation, other than the movement of statutory grain, is not subsidized by Government and is, in fact, cross-subsidizing the grain movement by larger amounts than the subsidies provided for that sector by Government. This situation is not conducive to efficiency and the provision of direct transportation subsidies paid by the Government to grain producers would be more effective. This would benefit all users of rail transport across the Country and place a more realistic focus on true transport costs.

16. As long as the railways do not place any serious impediments in the way of the efficient transportation of bulk commodities that are captive to the railways, this transportation sector may not require Government involvement. However, an appropriate role for Government could be the monitoring of freight rates and services and the provision of assistance to the public if cases of discrimination were identified.
17. Rail transportation of passengers and freight is potentially and, in many cases, actually the most fuel efficient mode of land transportation and would have a vital role if a shortage of petroleum fuels occurred.

APPENDIX A

NATIONAL TRANSPORTATION ACT

NATIONAL TRANSPORTATION POLICY

National
transportation
policy

3. It is hereby declared that an economic, efficient and adequate transportation system making the best use of all available modes of transportation at the lowest total cost is essential to protect the interests of the users of transportation and to maintain the economic well-being and growth of Canada, and that these objectives are most likely to be achieved when all modes of transport are able to compete under conditions ensuring that having due regard to national policy and to legal and constitutional requirements

(a) regulation of all modes of transport will not be of such a nature as to restrict the ability of any mode of transport to compete freely with any other modes of transport;

(b) each mode of transport, so far as practicable, bears a fair proportion of the real costs of the resources, facilities and services provided that mode of transport at public expense;

(c) each mode of transport, so far as practicable, receives compensation for the resources, facilities and services that it is required to provide as an imposed public duty; and

(d) each mode of transport, so far as practicable, carries traffic to or from any point in Canada under tolls and conditions that do not constitute

(i) an unfair disadvantage in respect of any such traffic beyond that disadvantage inherent in the location or volume of the traffic, the scale of operation connected therewith or the type of traffic or service involved, or

(ii) an undue obstacle to the interchange of commodities between points in Canada or unreasonable discouragement to the development of primary or secondary industries or to export trade in or from any region of Canada or to the movement of commodities through Canadian ports;

and this Act is enacted in accordance with and for the attainment of so much of these objectives as fall within the purview of subject-matters under the jurisdiction of Parliament relating to transportation. 1966-67, c. 69, s. 1.

POLITIQUE NATIONALE DES TRANSPORTS

Politique
nationale des
transports

3. Il est par les présentes déclaré qu'un système économique, efficace et adéquat de transport utilisant au mieux tous les moyens de transport disponibles au prix de revient global le plus bas est essentiel à la protection des intérêts des usagers des moyens de transport et au maintien de la prospérité et du développement économique du Canada, et que la façon la plus sûre de parvenir à ces objectifs est vraisemblablement de rendre tous les moyens de transport capables de soutenir la concurrence dans des conditions qui assureront, compte tenu de la politique nationale et des exigences juridiques et constitutionnelles,

a) que la réglementation de tous les moyens de transport ne sera pas de nature à restreindre la capacité de l'un d'eux de faire librement concurrence à tous les autres moyens de transport;

b) que chaque moyen de transport supporte, autant que possible, une juste part du prix de revient réel des ressources, des facilités et des services fournis à ce moyen de transport grâce aux deniers publics;

c) que chaque moyen de transport soit, autant que possible, indemnisé pour les ressources, les facilités et les services qu'il est tenu de fournir à titre de service public commandé; et

d) que chaque moyen de transport achemine, autant que possible, le trafic à destination ou en provenance de tout point au Canada à des prix et à des conditions qui ne constituent pas

(i) un désavantage déloyal à l'égard de ce trafic plus marqué que celui qui est inhérent à l'endroit desservi ou au volume de ce trafic, à l'ampleur de l'opération qui y est reliée ou au type du trafic ou du service en cause, ou

(ii) un obstacle excessif à l'échange des denrées entre des points au Canada ou un découragement déraisonnable du développement des industries primaires ou secondaires ou du commerce d'exportation dans toute région du Canada ou en provenant, ou du mouvement de denrées passant par des ports canadiens;

et la présente loi est édictée en conformité et pour la réalisation de ces objectifs dans toute la mesure où ils sont du domaine des questions relevant de la compétence du Parlement en matière de transport. 1966-67, c. 69, art. 1.

THE ROLE OF THE
ONTARIO NORTHLAND RAILWAY IN NORTHERN ONTARIO

In the history of Ontario, the Temiskaming and Northern Ontario Railway is among the most significant achievements ever undertaken by the provincial government. It was the single most important contribution to the opening of the north, known at the turn of the century as "New Ontario".

The establishment of the T&NO Commission was announced by Premier George Ross in 1902, after several years of proposals for railways into the north of the province, all of which had shown that the growing financial community of Toronto had the ambition and interest but not yet the risk capital to build a provincial railway that would extend northward to an ocean port on James Bay. Under pressure from a growing colony of settlement at the northwest end of Lake Temiskaming, and with expectations that timber and minerals would be found in quantity, the Government ventured with initiative into building and managing the new railway itself.

Construction began in 1903 and within two years the first trains were running the 113 miles from North Bay to New Liskeard. By then, the first silver discoveries had been made at Cobalt. They were found by workmen cutting ties for sub-contractors who were building the railway. Ore could now be shipped out to refineries and labour and supplies brought in on the railway; spur lines into the virgin forest led to the opening of new lumber mills. By 1910, within five years, Cobalt alone had grown from nothing to 10,000 people, linked in a "tri-town" area with Haileybury and New Liskeard.

Meanwhile, the growing farming settlement north of New Liskeard needed access to markets and its own kinds of supplies. The railway, as a colonization road, reached north to Englehart and then to a junction with the National Transcontinental Railway at the new town of Cochrane. For the people in these new towns and settlements, there were no roads

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or highways, only paths along concession lines or rough tracks for horse teams into the forest with its abundant varieties of wood. Communications between towns and settlements, or travel south to families, friends and stores of the older settled Ontario, were provided by the T&NO Railway. It was the one vital link that gave them access to the world beyond the northern wilderness even while it was opening up new towns and making possible the development of new resources.

The Provincial government recognized that the railway must be sustained as an essential means for the economic, social, and even the cultural development of the people of Northern Ontario. Its steam locomotives pulling their cars of passengers, mail, baggage, and freight soon became an important part of the life of the people, whether on the isolation of farms amid the noise and movement of new mining communities, or on the streets of growing towns such as Latchford, Cobalt, Haileybury, Englehart, Matheson, Porcupine, Timmins, or Cochrane. Indeed, the history of many of these towns begins and develops with the history of the T&NO Railway.

At one level, the towns were linked with the south, and in particular with Toronto, by trains such as the "Cobalt Special" which left Toronto each evening with Pullmans and Coaches, a dining car, and a library car, taking the brokers and prospectors who were developing the commercial resources between Cobalt and Cochrane. And from the North itself, from Cochrane or from Englehart, local trains carried the live-stock and produce of farms in the clay Belt to their markets in the towns southward from New Liskeard to North Bay. An editorial in the Cochrane Northland Post for September 30th, 1910, gives a sense of

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of how vital was the railway in the frontier lives of the people during the first third of the 20th century.

" The T&NO Railway has proved a valuable instrument in the opening of the agricultural and mineral lands of this great north country. Cobalt and other silver areas would not have been known for many years to come had it not been for the Railway, It has put money into the pockets of the settlers who are hewing out homes for themselves in the great northern forest and has placed them within reach of a market for their pulpwood and ties.

While the work of homemaking up here today is by no means an easy job, it is a very much easier and pleasanter undertaking than that of the pioneers of Old Ontario nearly a century ago. There were no railways in those old days and no markets, while today a settler finds a good market from the time he begins clearing his land. He has good schools; medical attendance when necessary, and is daily in touch with the outside world through the medium of the daily press, the telegraph, and the telephone. And nearly all of this is due to the building of the people's road, the T&NO Railway."

From the years before the First World War through the hard time of the 1920's and the depression of the "thirties", the Railway sustained a sense of community. It provided not only the transportation of resources and produce, which sustained employment, but the Commission of the T&NO made it a policy not to dismiss employees from the Railway itself during the hard years of depression before the Second World War.

In the early 30's to the end of World War II, there had been little incentive or opportunity for expansion. During the war years, the most that could be done was to hold the line with essential maintenance work.

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However, as the agency responsible for making possible the development of Northeastern Ontario, Ontario Northland had not lost sight of this, its prime purpose of being.

Immediately following World War II, a broad program designed to improve services and facilities was put into effect and is still being pursued. Of prime importance, and the first major step to curtail rapidly rising operating costs, a program of complete conversion to diesel was initiated. The steam locomotive, which had played such an important role in the earlier development finally gave way to progress in June of 1957, at which time the ONR locomotives were all diesel.

The current role of Ontario Northland has vastly changed from its early beginnings. Additional clauses incorporated into the revised statute of 1939 enabled the commission to:

"Purchase or otherwise acquire motor vehicles as defined by the Highway Traffic Act - Lines of Buses, Coaches, Trucks and Aeroplanes (with the right to operate these vehicles) for the purpose of carrying on or upon the highway or elsewhere the business of a public carrier of passengers and freight."

Today the familiar colours of ONTC Services can be seen throughout Northern Ontario.

- A modern truck fleet serving the Northeastern corridor;
- Highway Services, operating 21 modern coaches serving the corridor from North Bay to Hearst-Timmins-Chapleau-Sault Ste. Marie and Sudbury and Elk Lake. Gray Coach, Greyhound, and Voyageur all connect with ONTC runs. ONTC Tour Buses are also fulfilling a need for the

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vacation traveller with tours to Alaska, California, Florida and the Canadian East Coast.

- Rail Passenger Services - Toronto to Timmins, Cochrane and Moosonee.
- Rail Freight Services - Connecting at North Bay with CNR and CPR.
- Tourist Operations - Polar Bear Express/Chief Commanda II and ferry services which include the Tobermory Ferry and the Manitou II at Moosonee.
- norOntair - Eight aircraft serving twenty communities.
- Telecommunications serving the northeastern area from North Bay to Winisk on James Bay.

The foregoing indicates the present role as compared to the role being played in the early 1940's. The diversification came about as a result of the needs of the area and its residents.

Current Situation

The Minister of Northern Affairs is responsible to the Legislature for matters related to the Ontario Northland Transportation Commission. The services provided by the Commission as outlined previously have been segregated into two categories, commercial and non-commercial services. The commercial services include rail freight operations on the mainline, rail express, telecommunications, bus operations, Star Transfer Limited, Hannah Bay Goose Camp, and Lake Nipissing Marine Operations.

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The non-commercial services include the mainline conventional passenger train services (Northland); the Northlander passenger train; the Moosonee Branchline operations including the Polar Bear Express; the Tobermory/South Baymouth Ferry Operations; norOntair's operations; the Moosonee-Moose Factory Ferry and certain remote north projects, including Winisk Telecommunications and electric power operations at Winisk, Fort Severn and Moosonee (standby).

The Ministry of Northern Affairs annual Estimates contain provisions for full subsidization of the costs of operating the non-commercial services of ONR including any capital expenditures required in these services. The commercial services, on the other hand, are operated by the Commission with a view to maximizing net income and the return on invested capital on the understanding the Commission will provide for the capital expenditure requirements for these services through internally generated funds.

The Ministry of Northern Affairs has direct involvement in the approval of services, fares, operating subsidies and capital expenditures for the non-commercial services. The commercial services are reviewed annually by the Minister to set financial targets for the return on investment and capital investment levels and to review the prior year's results for each service.

MISCELLANEOUS

CHANGING LIFESTYLES AND RAIL TRANSPORTATION

A Background Report

Prepared by M.T.C. for input into the Study by
Ontario Task Force on Provincial Rail Policy

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June 30, 1980

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EXECUTIVE SUMMARY

Lifestyle is a composite of attitudes, motivations and observable actions that shape and reflect the way individuals make decisions. People's choice and perception of mode, and their decision to change modes, their plans whether to travel at all are based upon a variety of such lifestyle determinants as well as the characteristics of available transportation services.

Rail plays an important but limited role in today's transportation system for the movement of people, goods and information in Ontario.

Assuming no significant variations from today's patterns of work, leisure, and lifestyle attitudes as well assuming no significant changes in forecasts of the spatial arrangement and interaction of jobs, population and housing, it is difficult to foresee major modal shifts toward rail transportation -- either in metropolitan regions or inter-city travel.

A six part strategy is outlined in order to take advantage of select lifestyle changes that may represent potential growth in total or per capita rail transportation trip-making over the next five years.

Transportation is only a service and a means to an end; lifestyle is an end.

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BACKGROUND TO THE STUDY^{*}

In January, 1980, a nine-member task force was set up by the Ontario government to review existing rail services and give policy direction on the future role of the rail mode in the 1980's. The nine-member team is made up of a politician/chairman, four deputy ministers of the Ontario Government whose responsibilities are in line with the review, and two members each from both the academic and business communities.

The goal of the Task Force is to provide a perspective on rail transportation in the Province, and to examine the existing system, identifying changes required for the effective movement of people and goods, as a means of enhancing the social and economic development of Ontario.

The task force hopes to study in depth such concerns as the future role of rail in the Province's integrated transportation system, and the potential for using Ontario's abundant electrical energy supplies against future shortages of oil-based energy.

Approximately, twenty-four areas for investigation have been identified, including: railway's role, existing railway inventory, rail technology, energy issues, financial issues, environmental issues, jurisdictional issues and lifestyles.

This background report reviews changing lifestyles with a special focus on rail mode utilization.

*

Adapted from the Task Force's promotional leaflet.

I. INTRODUCTION

GENERAL OVERVIEW AND PROBLEM DEFINITION

Transportation services and mode utilization have always been in a state of change. The characteristics of the transportation system itself, as well as factors external to the system, in combination with certain elements of lifestyle have an impact on people's choice of mode for travel. The overall economic situation, the level of government expenditures and the effect of energy price and potential supply constraints are some factors that influence people's lifestyles which in turn may affect travel propensity and modal choice.

The basic characteristics of people -- including their general lifestyle, attitudes, preferences and behavior -- influences their choice of mode, the motivations behind choosing a particular mode, and the attributes of a mode as perceived by the traveller. These factors and the available transportation system characteristics determine the travel behaviour of particular groups and affect people's lifestyles as their transportation needs are concerned. In examining lifestyles and transportation systems the role of rail passenger transportation in serving these needs will become more evident.

Rail passenger usage in Canada has been on a steady decline since 1945, after the peak that occurred during and immediately after the war. In the mid 1960's a smaller growth in passengers carried occurred, peaking in 1967 during Expo. Rail usage was again on the decline after this brief period of growth. CPR has experienced a greater decline than CNR and did not experience the mid 60's increase as did CNR. CNR's improvement in passenger services including new and refurbished rail cars and accelerated schedules contributed to the increase in patronage.

Increases in the number of revenue passengers carried, mainly in the Quebec-Windsor corridor have occurred since 1975. During the same period however, there was no significant improvement

in service, equipment or travel time, but passenger fare subsidies were increased, and considerable promotional efforts were made to increase ridership.

All of the passenger rail service in Ontario is paralleled by some other form of transportation. In the Quebec City - Windsor corridor, competition occurs between the bus industry and rail. The bus carriers operating between major city pairs along this axis generally are much more flexible and can offer more local service even though bus fares must compete with the subsidized rail fares.

After World War II, competition for the rail mode was heightened by both the automobile and air services. The flexibility and the convenience of the auto, the increasing distance of work trips, the lure of suburban and ex-urban living, small perceived cost of driving, and an extensive highway network are some of the many factors that contribute to the shifting of some rail users from rail to automobile, and more generally influence people's choice of mode.

The advancement in air technology and improvements in air services and facilities, resulting in faster but more expensive travel, are factors contributing to declining rail patronage and an overall increasing air usage, particularly for long distance trips.

In summary therefore, rail usage has, until recent years, been in steady decline. This decline is as a result of many factors including the availability, convenience, and other attributes of other modes as well as the ubiquity of Ontario's excellent road infrastructure. These factors in turn reflect societal changes such as the distribution of employment in relation to residential locations; population structure and distribution; people's attitudes toward and preferences for various modes; as well as their perception of cost of travel and values placed upon freedom, mobility and convenience. These last set of factors can be better expressed by one word: LIFESTYLES

This Study examines these various Lifestyle structural factors as well as attitudinal/preference variables as they relate to the population in general and then relates these elements to people's travel behaviour, with special focus on rail.

PURPOSE/OBJECTIVE

The purpose of this study is:

- . To provide a suitable analytical framework for the understanding of changing lifestyle patterns, modal preferences and choices ---travel behaviour.
- . To present and evaluate a range of attitudinal and behavioral information on lifestyles and mode choice, and
- . To speculate as to whether rail transportation will be a selected mode, under what conditions, and if so, for what trips.

These objectives should provide part of the necessary information that will enable the Task Force to formulate and test appropriate provincial rail policies for the future.

II. LIFESTYLE: THE CONCEPT IN PERSPECTIVE

THE CONCEPT AND DEFINITION OF LIFESTYLE

Lifestyle has almost as many meanings and interpretations as there are individuals in society. The term has been used in connection with human behaviour and the urban environment in so many ways that there is no need, perhaps, to confine it to a single, restrictive definition. However, Lifestyle is discussed here in conceptual terms so as to provide a common understanding of the concept as used in this study.

Two elements can be included in Lifestyle. One is a set of behavioural desires which must be expressed to satisfy an individual's needs, wants, and desires. The other is a behavioural norm which is conditioned upon the individual by the environment in which he or she lives. While this distinction is easily discernable in theory, in real life, it is almost impossible to categorize behaviour into slots in terms of environmental conditioning and personal desires. The two act together and are closely intertwined.

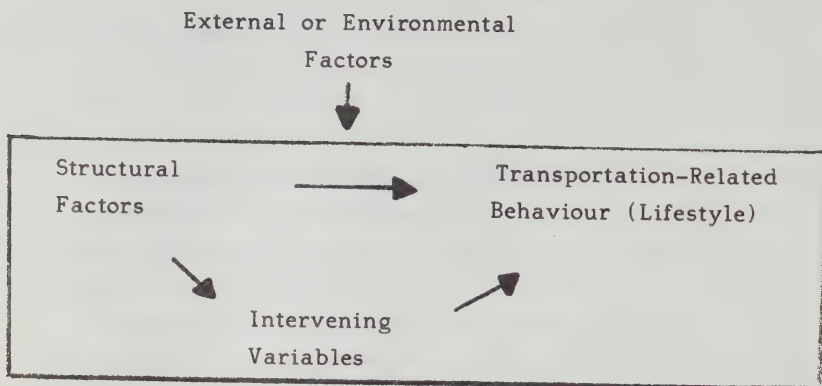
Lifestyle is a function of our family background and socio-economic status, including our stage in the life cycle, ethnic origin, cultural background, sex, religion and status or position in society. However, these conditions are always changing and often so is our lifestyle. While this is true, it must be recognized also that habits (Lifestyle) are easy to form but hard to change. Ingrained behaviour patterns cannot be easily changed overnight because of human nature.

One's Lifestyle is further shaped or influenced by one's attitudes, perceptions, expectations, value systems, wants, aspirations, needs and desires. These factors are not lifestyles themselves; rather, they are guidelines or parameters for behaviour as well as abstract goals which individuals seek to achieve.

The final set of elements that help shape and/or influence Lifestyle are those limiting factors that are outside the control of the individual. These include a broad range of factors such as the state of the economy, interest rates, government regulations, the availability and cost of capital and fuel, and community size as well as the availability of transportation service.

From the preceeding discussion, the following conceptual model of Lifestyle formation can be constructed:

CONCEPTUAL MODEL



Structural Factors: Structural variables are independent variables that are related to the individual's life cycle. Examples include age, sex, marital status, number of children, family size/structure, socio-economic status, employment status and participation rates. These factors are strong correlates of Lifestyle, and are likely to be good predictors of transportation-related behaviour.

Intervening Variables: These factors include an individual's attitudes, expectations and aspirations, as well as value system. It is very likely that these factors intervene between structural variables and the dependent variable --- transportation-related behaviour.

External or Environmental Factors: These factors are sometimes referred to as contextual factors. They include such conditions as city size, location of residences in relation to work places, and existence or availability of transportation facilities. These factors, though outside the control of the individual, influence the individual's behaviour.

Transportation-Related Behaviour (Lifestyle): This is the dependent variable and it results from the interaction of the three previously discussed factors. Lifestyles are expressions of all these factors acting together.

FACTORS THAT INFLUENCE AND SHAPE LIFESTYLE

From the preceeding discussion of the concept, the factors that influence and shape Lifestyle can be grouped into the following three broad categories:

- Structural Factors
- Intervening Variables, and
- External Factors.

As indicated earlier, Lifestyles habits are difficult to change overnight. In the long term, they could be influenced by increasing or decreasing available alternatives within the environment as well as by influencing attitudes, expectations and perceptions of individuals through communications. If we effect changes in available alternatives which in turn will influence preferences/attitudes, then we can expect new or different choices (Lifestyles) to emerge. Hopefully, the new pattern of behaviour will be consistent with our goals and objectives for society as a whole.

The above conceptual review suggests the following definition of lifestyle:

LIFESTYLE CAN BE DEFINED AS A COMPOSITE OF THOSE ATTITUDES/RATIONALES/MOTIVATIONS AS WELL AS THOSE . OBSERVABLE ACTIONS/CHOICES/BEHAVIOUR OF INDIVIDUALS EXEMPLIFIED IN THEIR EVERYDAY LIVING.

THE APPROACH TO AND ASSUMPTIONS IN THIS STUDY

Lifestyle can be studied in either of the following ways or a combination thereof: (i) public opinion survey to identify attitudes, preferences and rationales with reference to a particular issue or problem; (ii) factual examination of observable behaviour patterns of individuals or groups by documenting changes in behaviour under different Lifestyle descriptors --- (descriptors are captions that differentiate behaviour into broad analytical categories such as mobility, choice of residential location, marriage

and family formation); (iii) a review and documentation of the consensus of experts in the field as well as identifying the dominant behaviour pattern of the general population and population sub-groups; (iv) documentation of personal opinion and perception of how one believes the population (users and non-users both) is making choices. The source of information in this case could be one person's life experience extrapolated for the whole population or a sub-group.

Each of the approaches has special characteristics and limitations. A combination of approaches (i) and (ii) is used in this study. This combination should provide the understanding necessary for broad policy formulation and program development.

There are three major assumptions underlying this investigation:

- no significant variations from today's patterns of work, leisure and lifestyle attitudes
- no significant changes in forecasts of the spatial arrangement and interaction of jobs, population and housing
- no paradigm shifts in current levels of service by the various auto, rail, transit, air and other modes

In short, this study does not set out necessarily desirable future patterns of lifestyle or transportation choices but, rather, from an examination of lifestyle attitudes, behaviours and expressions of transportation choices, outlines the effect of changing lifestyles (past and present) upon near term rail transportation policy planning.

III. TRENDS IN SELECTED LIFESTYLE PATTERNS AND INFLUENCING FACTORS

WORK/EMPLOYMENT

Unlike population, employment estimates are very hard to come by. However, in this section, an attempt will be made to review past, present, and expected future trends in total employment, labour force participation rates by age and sex, and trends in the spatial distribution of jobs/firms.

Historical Trends in Employment:

A review of historical trends in total employed labour force indicates a steady growth rate over the thirty year period 1946 to 1976. (Table 1). Between 1946 and 1951, Ontario's total

TABLE 1

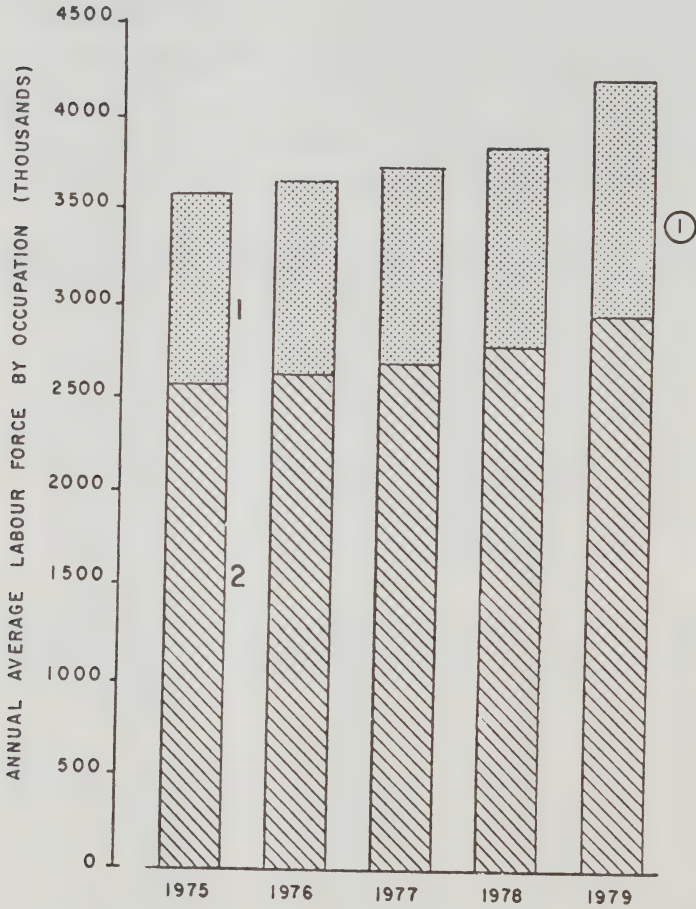
Historical Summary of Total Employed Labour Force		
Ontario: 1946 - 1976		
Year	Employed Labour Force (000)	Five Year Growth Rate %
1946	1,654	
1951	1,838	11.2
1956	2,096	14.0
1961	2,269	8.3
1966	2,651	16.8
1971	3,079	16.1
1976	3,652	18.6

Source: Statistics Canada, Historical Summary, 11-505, p. 49

labour force increased by 184,000 people -- an increase of 11.2%. However, the rate of growth declined somewhat (8.3%) between 1956 and 1961, and picked up again from 1961. More recent counts by Statistics Canada show that the 1961 trends are continuing though at a slower pace (Exhibit I).

EXHIBIT 1

EMPLOYED LABOUR FORCE - GOODS & SERVICE PRODUCING
ONTARIO 1975 - 1979



1 TOTAL EMPLOYED LABOUR FORCE GOODS-PRODUCING

2 TOTAL EMPLOYED LABOUR FORCE SERVICES - PRODUCING

① UNADJUSTED ESTIMATE, AUG. 1979

② 1 + 2 = TOTAL LABOUR FORCE

SOURCE: STATISTICS CANADA

Male/Female Participation Rates:

From Table 2, it can be observed that labour force participation rates for both males and females have also been increasing over time. The apparently slight decrease in male participation rates in the 1976/77 period could be attributed to statutory changes in the legislation which reduced the retirement age from 70 to 65.

TABLE 2

<u>PARTICIPATION RATES: ONTARIO</u>									
P.R.*	1956	1961	1971	1974	1975	1976	1977	1978	1979
TOTAL	56.9	56.9	59.5	61.8	64.1	63.9	64.3	65.5	66.7
MALE	85.0	82.1	79.5	80.3	80.3	79.3	79.4	80.1	80.4
FEMALE	29.4	31.9	40.2	44.0	48.6	49.0	49.8	51.5	53.6

* P.R. = Participation Rate

Source: Ministry of Treasury & Economics, CSS, Ontario Statistics, 1979, Table 114 p. 326; and Statistics Canada.

Of interest is the female participation rates. The data indicates that more women are actively participating in the work place. Female participation rates increased from 40.2% in 1971 to 53.6% by 1979, an increase of 33% in comparison to a 1.1% growth in male participation rates within the same period.

One explanation for this rapid growth in female participation rates is that in addition to the fact that more single women are working, more wives are also working: 20.2% in 1961 compared to 47.5% in 1976. Also, more mothers are now in the labour force: 32% of mothers with school age children worked in 1967 while by 1973 over 47% worked. All indications are that this figure is increasing and will continue to increase.^(*)

(*) Margaret Birch, The Family As A Focus For Social Policy, Draft Paper, April 1979.

Employment Projections by Sector:

Table 3 reveals some interesting trends in the development of the basic industrial structure of Ontario in terms of goods producing and service producing industries. The decade of the 1960's witnessed a very rapid expansion of the goods producing sector. The major contributing factors were the expansion and rationalization of auto-related production along with a substantial productivity growth in Ontario's mining and agricultural industries. These sectors received strong stimulus from expansion in both domestic and foreign markets.

TABLE 3

Employment Projection by Sector: Ontario 1980 to 1995

Year	1961	1970	1975	1980	1985	1995
<u>Sector</u>						
<u>Goods Producing</u>	1047	1227.8	1283.6	1380.9	1415.2	1371.8
% of Total	46.1%	40.4	35.0	32.9	29.1	24.4
Annual Average Growth Rate %		(1.8%)	(0.9)	(1.5)	(0.5)	(-0.4)
<u>Service</u>	1222	1809.2	2328	2818.1	3343.8	4290.3
% of Total	53.8	59.5	63.6	67.1	70.2	75.7
A.A.G. Rate		(4.5%)	(5.2)	(3.9)	(3.5)	(2.5)
<u>Total</u>	2269	3037	3661.6	4199	4759	5662.1
A.A.G. Rate %		(3.3)	(3.5)	(3.1)	(2.5)	(1.7)

Source: Ontario M of T & Economics, Long Term Projections, June 1976.

During the 1960's, the service sector's rapid growth has been attributed to employment growth in this sector rather than growth in productivity. The net result as shown on Table 3 was that the service sector's share of total employment increased significantly. This pattern has continued into the 1970's.

Over the forecast period the service sector is expected to grow more rapidly than the goods sector although the rate of growth is expected to decline slightly after 1980. However, Table 3 indicates that this sector will account for approximately 70% of total employment by 1985; and over 75% by 1995.

Trends in the Spatial Distribution of Industries and Jobs:

In the 1950's and early 1960's employment and industries used to be concentrated in the central areas of urban centres. However, with the advent of suburbs, regional shopping centres and office parks, industries have gradually moved out of central areas to the suburbs of urban centres. However, this outward migration of industries is not compatible with the labour force skills of those living in these areas. The result is increased cross-commuting for work trips.

A detailed analysis of the recent locational choices of firms (both goods producing and service producing) in the six major census metropolitan areas (CMAs) in Ontario indicates that the pattern discussed above is continuing. (Table 4 and Exhibit 2). The table shows that for the six major CMAs, the rate of increase in the number of firms employing 50 people or more was greater in the suburban areas than in the central city areas between 1974 and 1979. However, a larger proportion of employment particularly in the service producing sector are still located in central city areas of these CMAs.

Trends in the Average Work Week:

Exhibit 3 shows that the average work week for employees in all sectors of the economy is shrinking. In the 1950's a large proportion of the labour force worked 35 to 45 hours or more. This proportion has been declining gradually since the 1960's and 1970's. By 1978, the average work week was 35.5 hours. By 1985 estimates are that the average work week will decline to a little over 34 hours per week.

TABLE 4

Trends In The Locational Decisions of Major Firms* 1974 and 1979

AREA	GOODS PRODUCING			SERVICES PRODUCING			TOTAL		
	FIPMS 1974	FIRMS 1979	% Δ	FIRMS 1974	FIPMS 1979	% Δ	FIRMS	FIPMS	% Δ
TORONTO:									
CENTRAL	791	720	- 9	895	1081	21	1686	1801	7
SUBURBAN	1043	1170	12	610	995	63	1653	2169	31
TOTAL	1834	1890	3	1505	2076	38	3339	3970	19
OTTAWA:									
CENTRAL	83	74	- 11	181	310	71	264	384	45
SUBURBAN	3	11	267	4	12	200	8	23	188
TOTAL	86	85	- 1	185	322	74	272	407	50
WATERLOO:									
CENTRAL	136	129	- 5	107	153	43	243	282	16
SUBURBAN	68	80	18	43	85	98	111	166	50
TOTAL	204	209	2	150	238	59	354	448	24
LONDON:									
CENTRAL	94	95	1	96	155	61	190	250	32
SUBURBAN	23	23	0	4	14	250	27	37	37
TOTAL	117	118	1	100	169	69	217	287	32
KITCHENER:									
CENTRAL	117	106	- 9	66	90	36	183	196	7
SUBURBAN	85	90	6	14	33	136	99	123	24
TOTAL	202	196	- 3	80	123	54	282	319	13
WINDSOR:									
CENTRAL	95	80	- 16	59	76	29	154	156	1
SUBURBAN	13	16	23	8	17	113	21	33	57
TOTAL	108	96	- 11	67	93	39	175	189	8

Source: Dun and Bradstreet, 1974 and 1979, Special Tabulations
for M.T.C.

* Firms of 50 Employees or more.

% CHANGE IN NUMBERS OF MAJOR GOODS PRODUCING FIRMS: 1974-'79

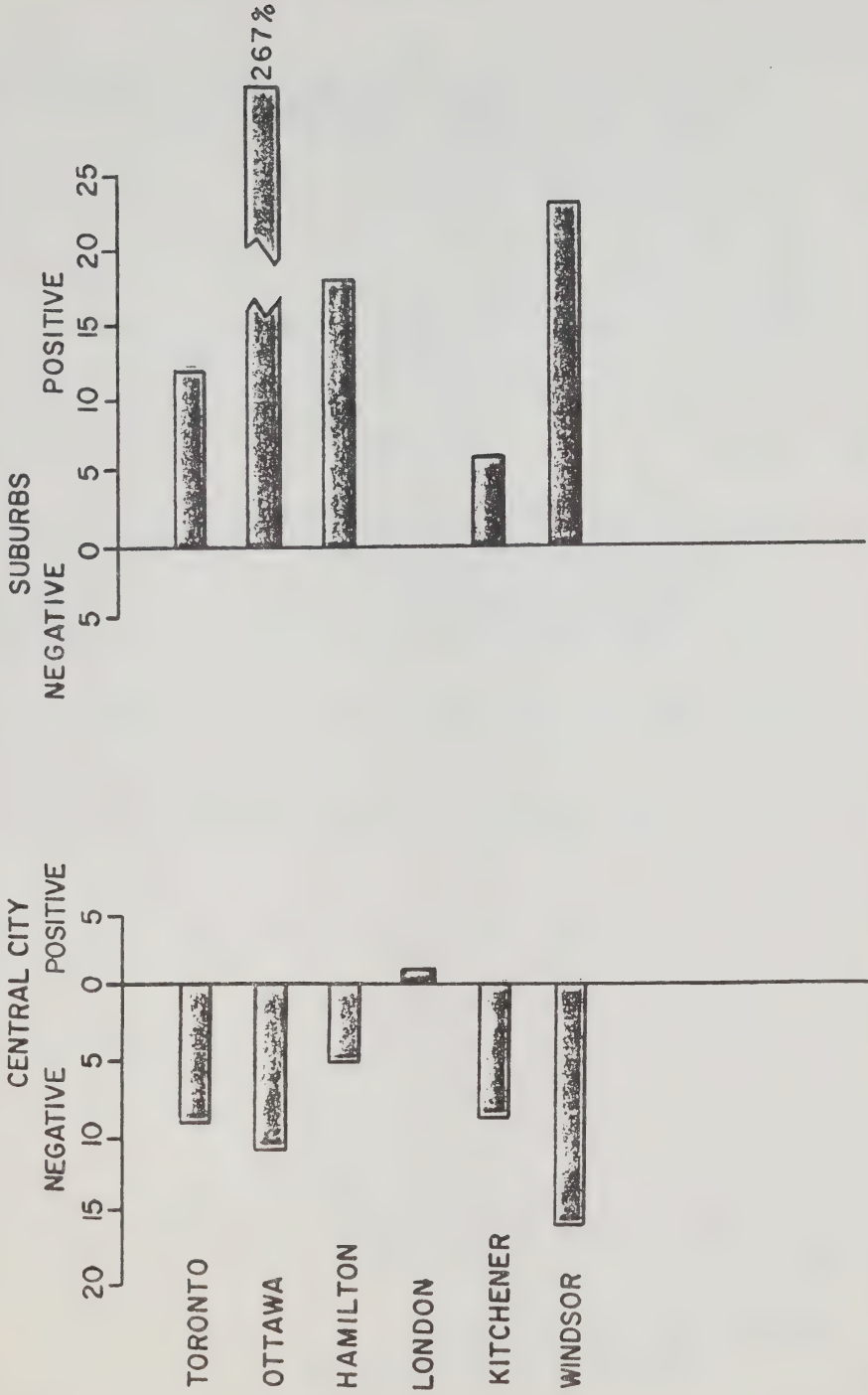
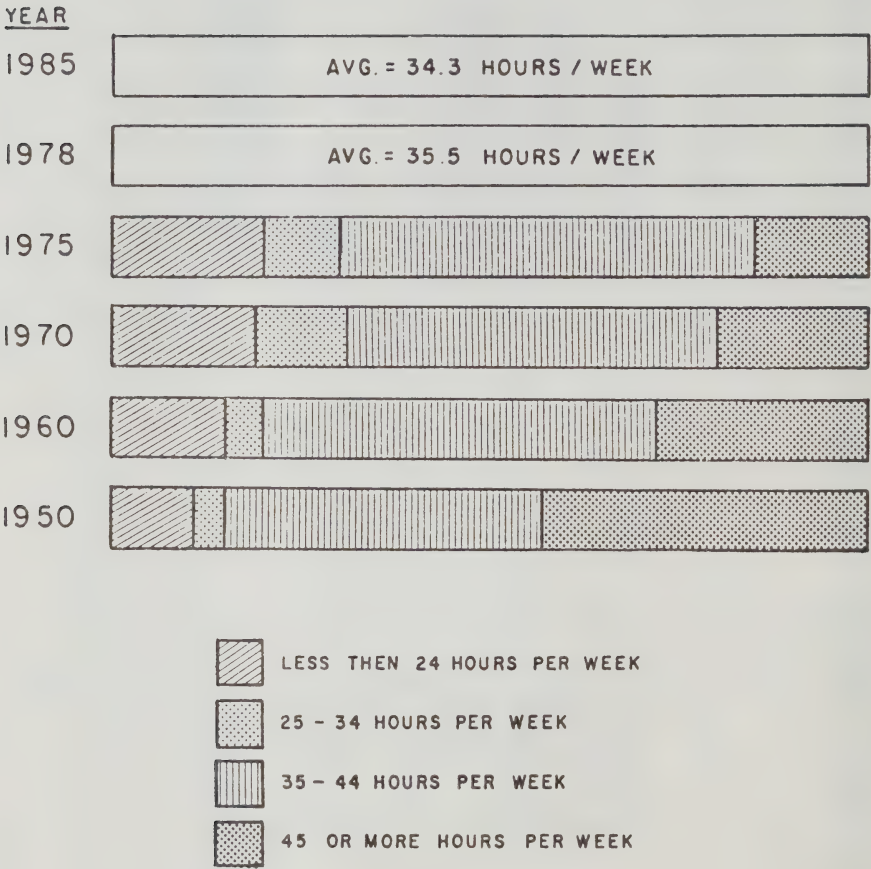


EXHIBIT 3

THE WORK WEEK^① IS BECOMING SHORTER
BUT AT A MORE MODERATE RATE
IN RECENT YEARS



① NATIONAL STATISTICS

SOURCE: WOODS GORDON & COMPANY
TOMORROW CUSTOMERS TODAY, 1979

This reduction in the hours of the work week could have implications for transportation. For an example, if the gradual decline in the number of hours worked per week, resulted in say a 4-day work week, the impacts on urban public transportation systems could be significant. Furthermore, a reduction in the work week from 5 to 4 days means that households would have an extra day to pursue other activities. If these other activities involved travelling, then, the implications on other modes such as auto, air and rail could be significant though in varying proportions.

Implications of Trends on Transportation

What do all these trends mean for transportation in general and rail transportation in particular? For transportation in general, the impact could be quite significant for the auto mode. Future patterns indicate that there could be a lot more cross-commuting for the work trip by auto as a result of the location of employment in relation to local labour force skills. This would mean increased traffic volumes on highways in or near metropolitan areas particularly during the morning and afternoon peaks. The result would be increased demand for road infrastructure to accommodate the higher volumes of traffic. Also, this is dependent on what type of transportation strategy is adopted and whether emphasis will be on transit or will continue to be on roads and auto travel within metropolitan regions.

Travel distances/times as demonstrated on Exhibit 4 for the work trip are usually between 30 to 45 minutes for the major proportion of the labour force.

Because of the relatively short travel times for work trips (Exhibit 4 and 5), and except for executive business travel (intercity), the impact of these trends on the air mode is expected to be relatively minimal.

EXHIBIT 4

CUMULATIVE FREQUENCY DISTRIBUTION OF TRAVEL TIME
FOR THE JOURNEY TO WORK FOR TORONTO CMA

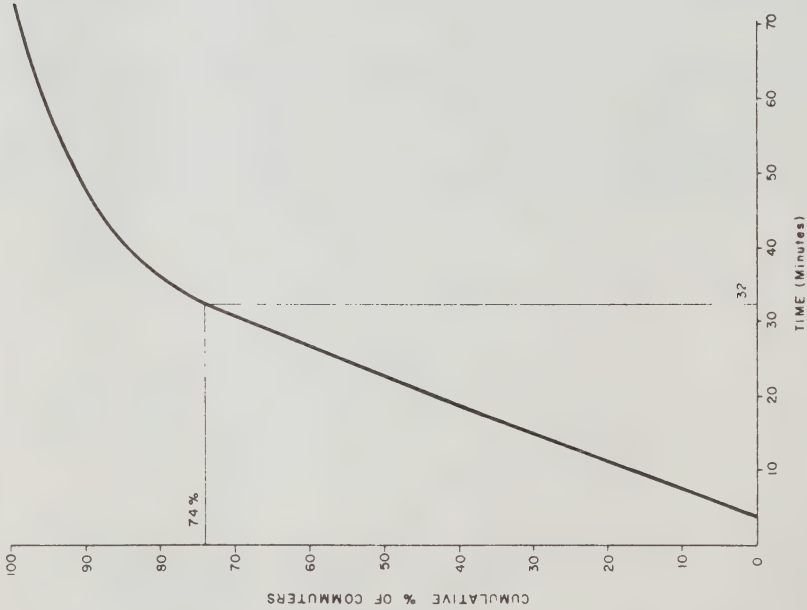


EXHIBIT 5

PERCENT OF COMMUTERS TRAVELLING LESS THAN
OR EQUAL TO 32 MINUTES TO WORK

CENSUS METROPOLITAN AREA	%
HALIFAX	87
QUEBEC - LEVIS	93
MONTREAL	74
OTTAWA - HULL	89
TORONTO	74
HAMILTON	85
WINNIPEG	89
CALGARY	85
EDMONTON	89
VANCOUVER	80
ST CATHARINES - NIAGARA	94
OTHER CMA'S	95
ALL CMA'S	83%

Impact Upon Rail

Past employment growth trends are continuing to increase at a slower pace with little overall impact upon the inter-city rail system. The increasing number of industries moving out of central cities into suburban and ex-urban locations results in more demand for cross-commuting within Ontario's major metropolitan regions. The rail impact may include more demand for major urban commuter rail service like the "GO" and Scarborough LRT systems (in Toronto) in major metropolitan centres.

Any provision of more commuter rail service must take into account the potential perpetuation of greater live-work imbalances within municipalities and the problem of lack of integration of municipal transit services between and across municipalities within existing metropolitan regions.

The shorter average work week will have a significant financial impact upon the revenues available for commuter rail service.

Continuing increases in labour force participation rates should result in more total traffic (road, transit, commuter rail, and other) within metropolitan areas. There is not enough information on job sharing and other like innovations to assess their impact upon rail transportation.

LEISURE/RECREATION

This section provides an overview of the characteristics of the adult population participating in leisure and recreational activities. The information used is derived from a 1972/78 nation-wide survey by Statistics Canada, and a 1979 report by the Ontario Ministry of Culture and Recreation using the Ontario portion of that survey data for analysis.

Trends in Leisure and Recreation Participation:

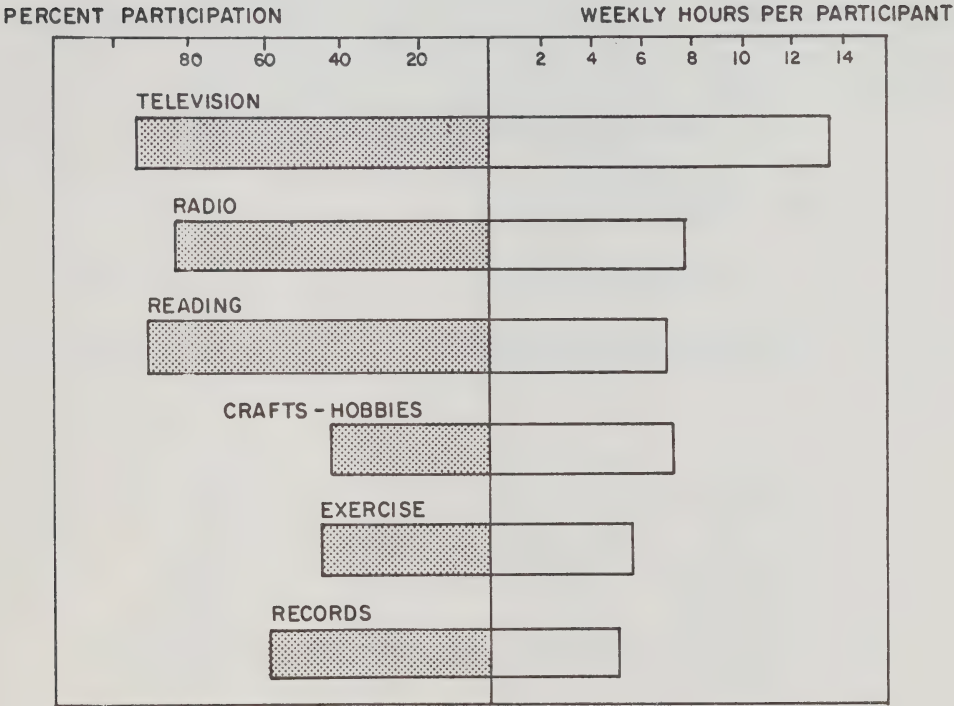
Before comparing changes and shifts in participation rates between 1972 and 1978, it is important to provide a summary overview of

of the observed pattern for 1978. The pattern as recorded in the 1978 survey are presented in the following exhibits: 6, 7, 8, and 9. The information contained on those four exhibits can be summarized as follows:

- Over 90% of the adult population watch television for approximately 13.5 hours per week.
- 88% read for an average of 7.3 hours per week.
- In that order, listening to radio was 3rd highest in both participation rate and number of hours spent. These were followed by playing records, exercise and crafts/hobbies.
- For activities that required travelling, participation rates were highest in movies, library visits, sports and arts; while the number of visits per participant was highest for sports events, library visits, movies and arts.
- Exhibit 8 shows that there is some correlation between level of participation and education. Those with higher education are more active participants in almost all the activities examined.
- Exhibit 9 also shows some relationship between level of participation and age. This would suggest that in predicting future participation rates age and sex could be used as independent variables.

EXHIBIT 6

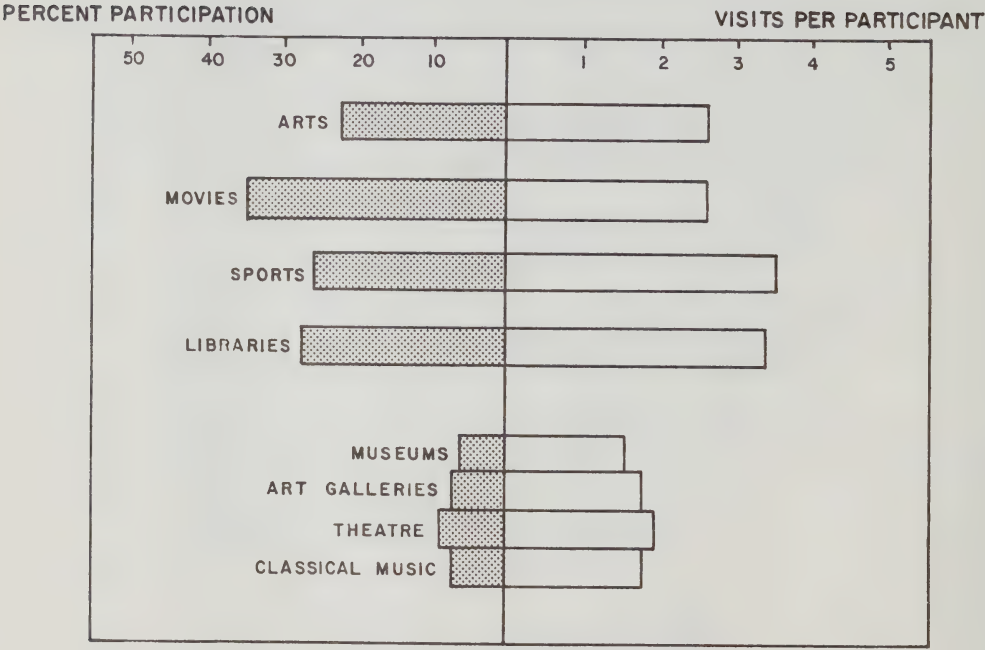
ADULT PARTICIPATION IN SELECTED ACTIVITIES
ONTARIO, FEBRUARY 1978



SOURCE: ONTARIO MINISTRY OF CULTURE & RECREATION,
RECREATING ONTARIO IN THE EIGHTIES: 1972 - 1990
FEBRUARY, 1980.

EXHIBIT 7

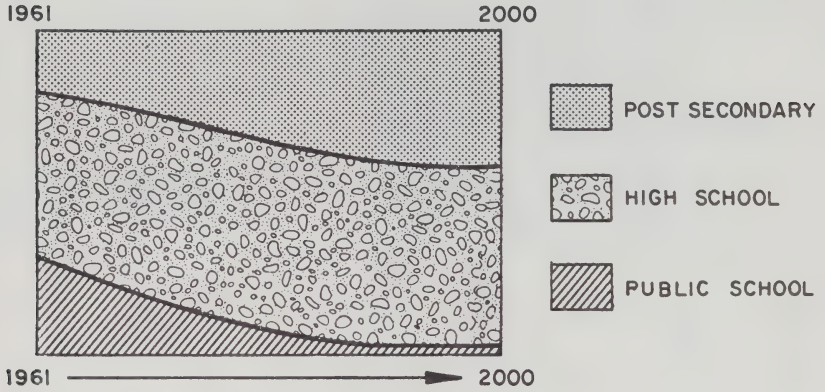
ADULT PARTICIPATION IN SELECTED ACTIVITIES
ONTARIO, JAN. - FEB. 1978



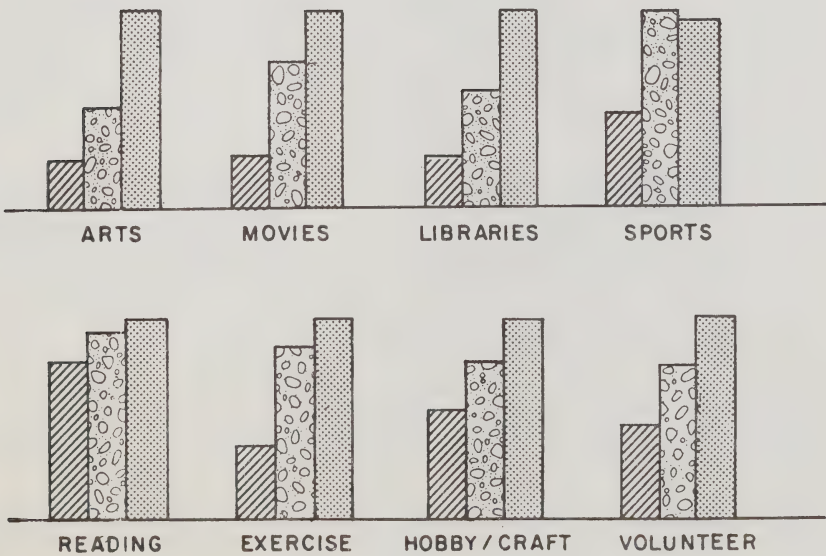
SOURCE: ONTARIO MINISTRY OF CULTURE & RECREATION,
RECREATING ONTARIO IN THE EIGHTIES: 1972 - 1990,
FEBRUARY, 1980

EXHIBIT 8

THE CHANGING EDUCATIONAL COMPOSITION
IN ADULT POPULATION 1961-2000



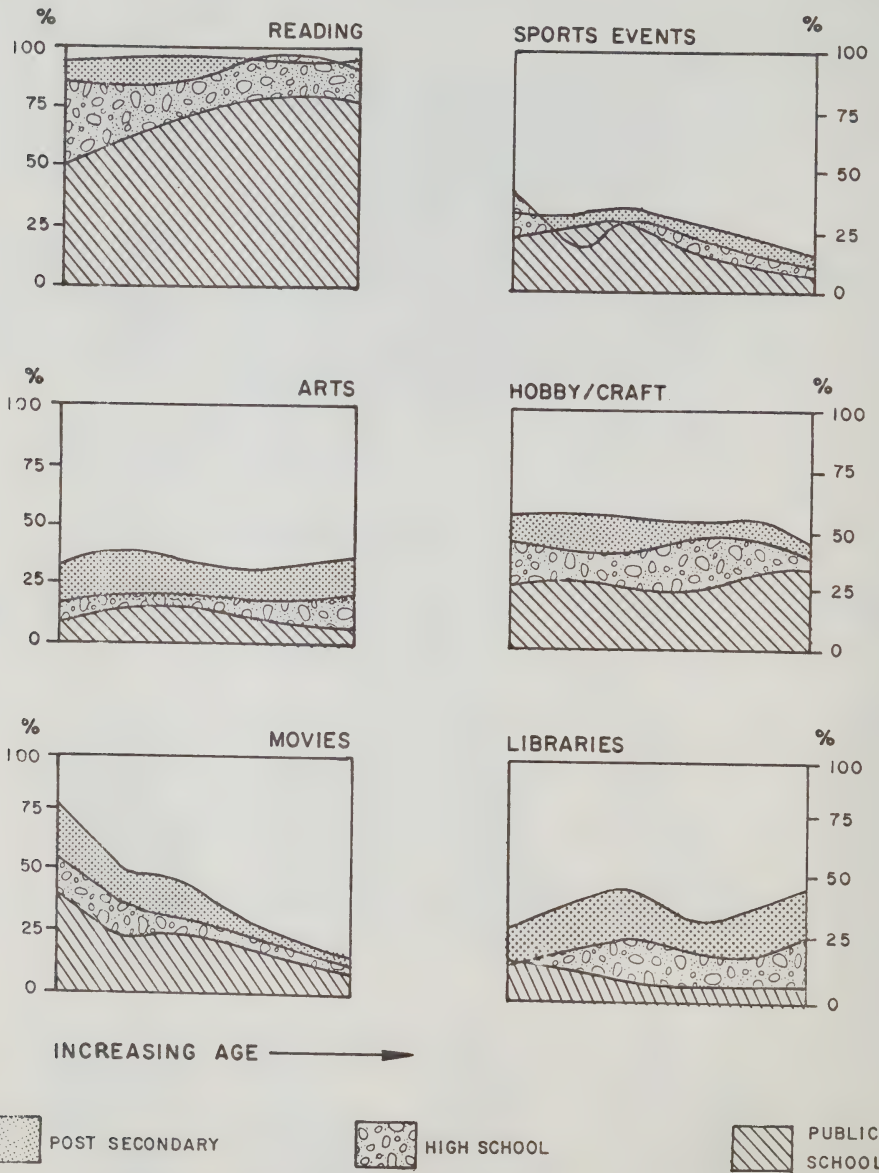
RELATIVE LEVELS OF PARTICIPATION BY EDUCATIONAL LEVEL
SPRING, 1978



SOURCE: ONTARIO MINISTRY OF CULTURE & RECREATION, RECREATING ONTARIO IN THE EIGHTIES: 1972 - 1990,
FEBRUARY 1980

22
EXHIBIT 9

THE PERCENTAGE OF THE ADULT POPULATION PARTICIPATING IN
SELECTED ACTIVITIES BY AGE & EDUCATION, SPRING 1978



SOURCE: ONTARIO MINISTRY OF CULTURE & RECREATIONS, RECREATING ONTARIO IN THE
EIGHTIES: 1972 -1990, FEBRUARY, 1980.

Tables 5 and 6 show participation rates and changes in rates between 1972 and 1978 for selected leisure and recreation activities.

TABLE 5

<u>Changes in Reported Participation, 1972-78</u>				
Activity	Change in Percent Participating (Percent)	Change in Average Time	Average Proportion of Time	
			1972	1978
Television	-1	1	.44	.36
Radio	9	3	.17	.18
Reading	21	6	.16	.20
Records	9	-7	.09	.09
Crafts/Hobbies	21	22	.06	.09
Exercise/Sports	20	-9	.06	.07

Source, Culture & Recreation, Recreating Ontario in the 80s, Feb. 1980

TABLE 6

Average Number of Visits Per Ontario Adult

<u>Activity</u>	<u>1972</u>	<u>1978</u>	<u>'78 as % of '72</u>
Arts	0.66	0.59	89
Sports	1.49	0.94	63
Movies	1.17	0.93	79
Popular Music	0.43	0.24	56
Libraries	N.A.	0.92	N.A.

Percent Reporting Participation

Arts	24	22
Sports	30	26
Movies	41	35
Popular Music	16	12
Libraries	n.a.	27

Source: Culture & Recreation, Recreating Ontario in the '80s, Feb. 1980

The 1972/78 trend as shown on Tables 5 and 6 can be summarized as follows:

- Only televisions experienced a decrease in the proportion of Ontario adults participating in that activity. All other activities showed increases between 1972 and 1978 (Table 5).
- Only two activities (records and exercise) experienced declines in average time spent on those activities. Crafts/hobbies showed greatest gains.
- Arts, sports, movies, popular music, libraries all showed significant declines in the number of visits between 1972 and 1978.
- Percent reporting participation in those activities also showed significant declines (Table 6).

Future Projections Based on Age and Education

Applying current participation rates in age-specific education categories to projected number of people expected to be in those categories in 1990 and 2000, allows for a quantified projection of potential levels of activity for those years. Using this approach, the results suggest that the strongest growth would be for reading (especially for books) and for volunteer work (Exhibit 10). This is due to the changing size of population in terms of age and education. It does not assume changes in leisure styles or participation rates. Crafts activity, exercising, radio and television use would increase slightly more than population growth alone would indicate, and record listening would also increase but at a rate slower than population growth.

Considering the expected effect of age and education over the period for which data is available (1972-1978), reading, radio, volunteer and television activity are anticipated to grow significantly during the period 1978-1990 relative to the period 1972-1978. Time devoted to exercise and record listening are expected to increase less (Exhibit 11). However, we know that in the 1972-1978 period, factors above and beyond age and education magnified the changes these two characteristics alone otherwise would have experienced. As shown in Exhibit 11, by 1990 the crafts and hobby activity is expected to increase by seventy percent, reading by sixty, radio by thirty-five, exercise by twenty-five, television by fifteen, and record listening by ten.

25
EXHIBIT 10

PROJECTED GROWTH BY TOTAL HOURS

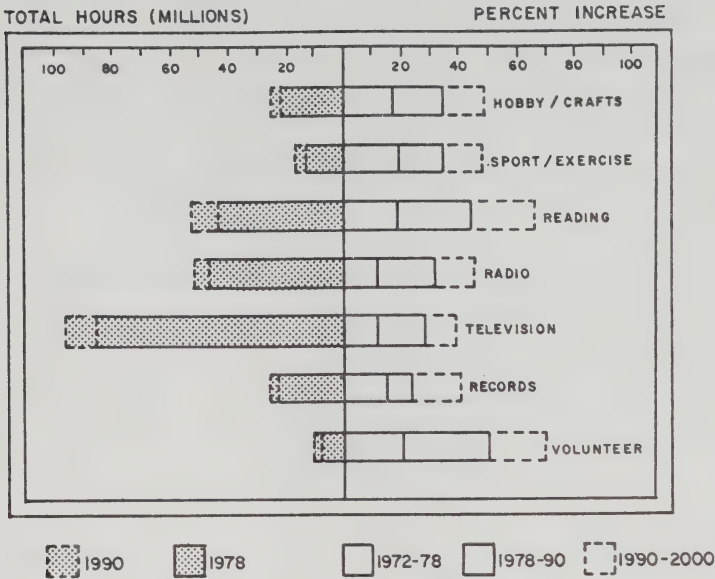
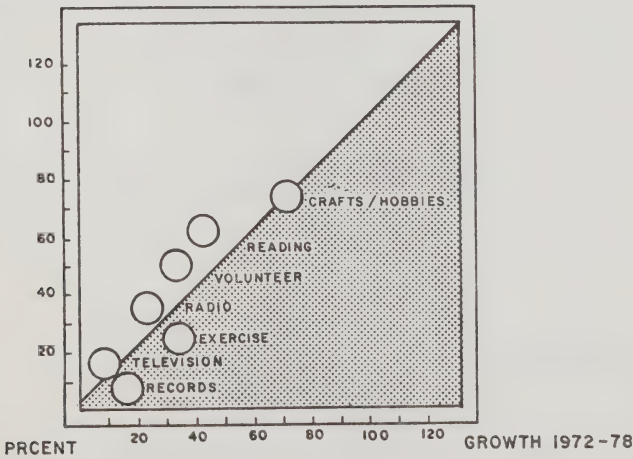


EXHIBIT 11

GROWTH PROJECTED BY AGE & EDUCATION USING
1972 - 78 TRENDS

PROJECTED
GROWTH
1978 - 90



SOURCE: ONTARIO MINISTRY OF CULTURE & RECREATION,
RECREATING ONTARIO IN THE EIGHTIES: 1972 - 1990,
FEBRUARY 1980.

For excursion activities, the shifts in age-education composition of the population considered alone would imply a 32% increase in arts attendance between 1978 and 1990. Library use would increase by 30%, sports attendance by 16%, and movie attendance by 11%. It is anticipated that by the end of the century, these increases would be fifty percent for both the arts and libraries, twenty-seven percent for sports, and seventeen percent for movies. (Exhibit 12).

The actual data available from 1972 to 1978, even though not directly extendable, indicates that growth in the arts is likely to be higher than the age-education projection, movies also higher, and sports about as projected. As Exhibit 12 shows, growth in the arts to 1990 could then be about seventy percent, for movies about twenty percent, and for sports events about twenty percent.

Based on potential growth as indicated by the 1972-78 trend, continued large growth could be expected for art galleries and museums. It is expected that by 1990, attendance at the arts could surpass that of sports in terms of actual numbers as well as in hours of participation.

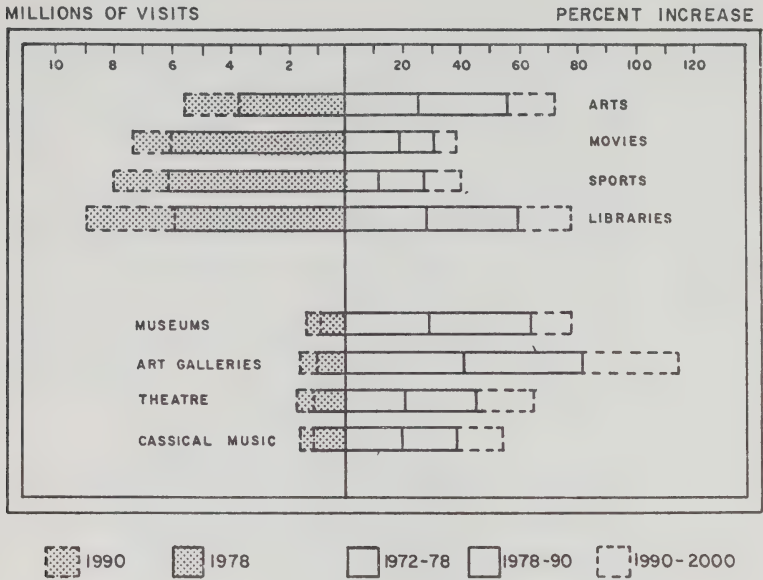
In general, during the period between 1972 and 1978, the total number of hours committed provincially for the six activities for which data is available increased from about thirty to about thirty-five hours per week per person.

It was also found that participation in leisure and recreational activities is strongly correlated with education. Future projections indicate significant growth in reading, arts attendance, and volunteer work.

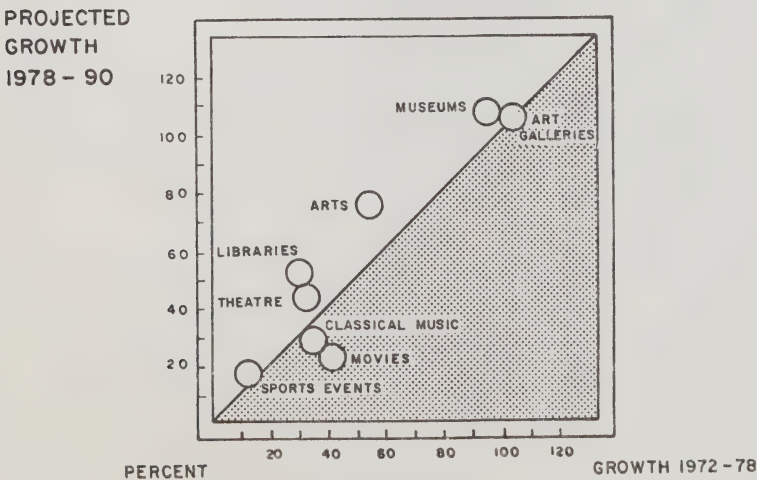
Longer Distance Activities

Recent but incomplete information indicates that at present we may be in the middle of a ten year transition in Ontario in longer distance recreational activities. Specifically, these trends indicate:

EXHIBIT 12
PROJECTED GROWTH IN TOTAL ATTENDANCE



GROWTH PROJECTED BY EDUCATION & AGE USING
1972 - 78 TRENDS



SOURCE: ONTARIO MINISTRY OF CULTURE & RECREATION,
RECREATING ONTARIO IN THE EIGHTIES:
FEBRUARY 1980.

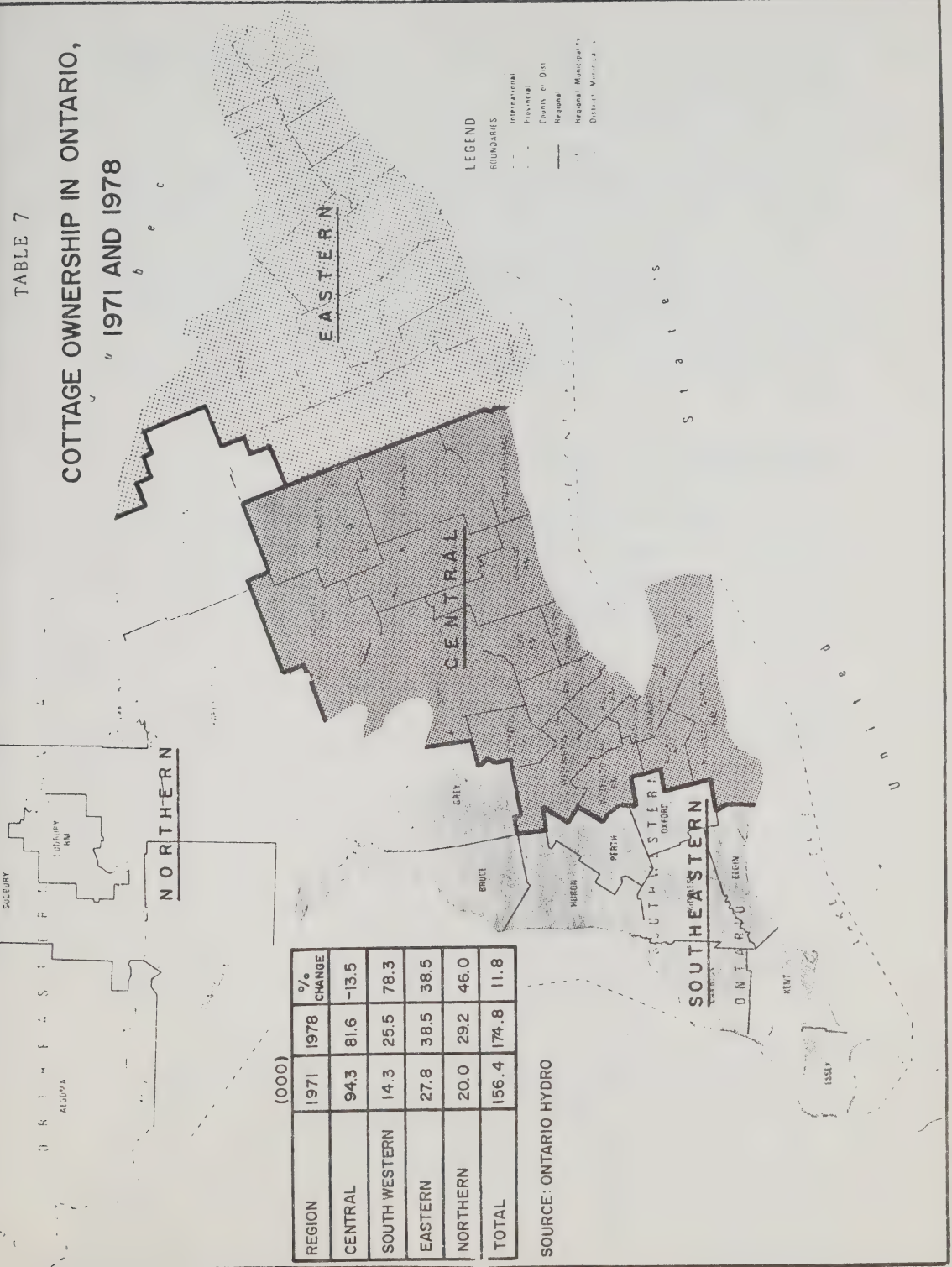
- a diminution in attendance at more remote Provincial parks, notably in Northern and Eastern Ontario
- a levelling off in the total number of cottages in Ontario, with declines in South-Central Ontario and increases in other regions of the Province (Table 7)
- a potential growing acceptance of "nostalgic" trans-continental leisure rail packages as a recreational activity
- increased conversion of summer cottages to year-round permanent use by retirement or pre-retirement age adults
- increased shorter duration, closer-to-home mini-vacations by individuals and families living in major metropolitan regions
- even longer distance summer weekend auto trip lengths to more remote cottage districts
- increased traffic for foreign destination vacations, by auto and air modes, particularly during the winter season
- increased acceptance by part of the tourist public of urban-based shopping, entertainment, and related activities as a replacement destination for rural, remote activities

The fact that many of these indicators are flatly contradictory should cause us to be tentative in expressing total societal consequences five years hence, either for transportation or communications. Changes in energy prices as a proportion of household disposable income; trends in public expenditures for trans-continental rail packages, at-home swimming pools, and major theme park attractions; as well as cordon counts on major weekend recreational routes all will have to be monitored carefully in

TABLE 7

COTTAGE OWNERSHIP IN ONTARIO,
1971 AND 1978

^a ^b ^c



REGION	1971	1978	% CHANGE
CENTRAL	94.3	81.6	-13.5
SOUTH WESTERN	14.3	25.5	78.3
EASTERN	27.8	38.5	38.5
NORTHERN	20.0	29.2	46.0
TOTAL	156.4	174.8	11.8

the months ahead to discern whether Ontarian's will emerge from today's transition period with recreational patterns vastly different from five or ten years ago.

It can be said that various factors preclude rail service to cottage districts. These include the low density and scattered distribution pattern of cottages; abandonment of existing rail service to smaller centres; the difficulty of transporting cottage provisions, boats and appliances in excess of personal baggage by rail; and the virtual requirement for an auto at the destination; as well as the distance between rail stations and the cottage or resort property in question.

Impact on Rail

Because of the nature of these activities and the relatively short distances to be travelled changes in the activity/participation pattern discussed above will have little or no impact on the inter-city rail mode. The greatest transportation impact would be felt in the auto and public transit mode.

There is limited time series attendance or modal choice alternative preference survey information for theme destination parks (such as major animal farms, zoos, science centres, and pioneer days villages) to accurately assess rail's potential service for such markets. Current trends suggest little or no market segment potential for rail service to remote cottage or resort destinations. There may be some need for more careful investigation of transit bus or rail service to near-urban-destination, major cultural/sports/entertainment attractions. Transit rather than rail may offer more convenience and flexibility to the recreating public in this regard.

Transcontinental leisure rail packages may represent the only area for potential expansion of inter-city rail service. Even in this case, the overall market appears limited.

VALUE SYSTEM

A review and analysis of the prevailing value system of the population without a survey of attitudes and priorities is rather tricky. Time constraints did not allow for such surveys to be conducted.

However, based on other observed behaviour patterns by the general population, preferences or attitudes towards certain issues, and specific modal choices made, it is possible to briefly summarize what appears to be the dominant value system as it relates to transportation in general.

A review of relevant literature on the subject (see bibliography) indicates that individual freedom (particularly freedom of choice as it relates to transportation) is uppermost on people's minds. It is this very reason, that has caused many families to migrate to Canada, United States, and other Western democracies. People value their freedom. In transportation this is called mobility rights.

When it comes to transportation, people want alternatives to choose from and the literature on the subject suggests that choices of modes, for an example, are made with the following factors in mind:

- flexibility of routing,
- speed,
- convenience,
- safety,
- protection from the elements
- cost, and
- psychological benefits of movement.

The conveniences provided by the auto cannot be exhaustively and adequately enumerated here, but experiences in North America and elsewhere indicate the significance of this factor. In using the auto, one is not restricted by routes, schedules and space. The overall conclusions of these studies is that given a choice, people will choose those modes that provide them with privacy. The only mode that provides this privacy (listening to the radio, smoking, etc.) is the personal auto.

modes are energy efficient in different circumstances and locations. Other factors such as speed or convenience will have to be met before permanent and large shifts are made from one mode to another. Rail may not be able to satisfy the psychological value expectations of even a more energy-efficient consumer society.

POPULATION

One could easily write a book on demographic trends and forecasts. And in fact, such books do exist. But, to make population analysis in this report relevant to inter-city rail transportation, it is necessary to select and examine only those components of population change that could have direct bearing on the subject. As such, this section will focus on both inter-provincial and inter-city shifts (Ontario) as well as overall growth rates and future forecasts for Ontario.

Recent Trends in Population Growth: Canada/Ontario

Between June 1, 1971 and June 1, 1976 the population of Canada increased by 1,424,300 or by 6.6%. This growth, however, was unevenly distributed among the provinces and territories. Five provinces, Newfoundland, New Brunswick, Ontario, Alberta, British Columbia, and the Yukon and N.W.T. grew faster than the Canadian average of 1.29% per annum; four provinces grew at a slower rate (Prince Edward Island, Nova Scotia, Quebec and Manitoba) and Saskatchewan was losing population at 0.106% per annum. As Table 8 below indicates, the two western Provinces grew at a rate almost twice as fast as the Canadian average whereas the Yukon and N.W.T. grew at a rate three times the Canadian average. The impetus for their growth came mostly from interprovincial migration.

As a result, regional distribution of population in Canada underwent significant change. During the five year period, 1971-76 the share of the two Western provinces and Territories increased by slightly over one percentage point, Ontario's share increased by a fraction, whereas the share of population of the remaining regions decreased cumulatively by 1.3 percentage points.

TABLE 8

Canada: Population Growth by Province between 1971 and 1976

Province	Census 1971 '000	Distribution %	Census 1976 '000	Distribution %	Pop. Number '000	Growth Percent	1971-76 Per annum
Newfoundland	522.1	2.42	557.7	2.43	35.6	6.81	1.33
Prince Edward Is.	111.6	0.52	118.2	0.51	6.6	5.91	1.15
Nova Scotia	789.0	3.66	828.6	3.60	39.6	5.02	0.98
New Brunswick	634.6	2.94	677.3	2.95	42.7	6.72	1.31
Quebec	6,027.8	27.95	6,234.5	27.13	206.7	3.43	0.68
Ontario	7,703.1	35.71	8,264.5	35.94	561.4	7.29	1.42
Manitoba	988.2	4.58	1,021.5	4.44	33.3	3.37	0.66
Saskatchewan	926.2	4.29	921.3	4.00	- 4.9	-0.53	-0.11
Alberta	1,627.9	7.55	1,838.0	7.99	210.1	12.91	2.46
British Columbia	2,184.6	10.13	2,466.6	10.73	282.0	12.91	2.46
Yukon & NWT	53.2	0.25	64.4	0.28	11.2	21.05	3.89
Canada	21,568.3	100.00	22,992.6	100.0	1,424.3	6.60	1.29

Canada: Relative population distribution by Regions
1971 and 1976

Regions	Population Distribution		Difference 1971-76 Percentage points
	1971 %	1976 %	
Atlantic Provinces	9.54	9.49	- 0.05
Quebec	27.95	27.13	- 0.82
Ontario	35.71	35.94	+ 0.23
Manitoba, Saskatchewan, Alberta, British Columbia, Yukon and N.W.T.	8.87	8.84	- 0.43
	17.93	19.00	+ 1.07
Total	100.00	100.00	0.00

As can be seen from the above tabulation, Alberta, B.C., Yukon, and NWT as a total, achieved a growth rate almost twice as fast as that of the national average. Ontario performed fractionally better, while the Atlantic Provinces were fractionally below

the national average. Quebec achieved only 1/2 the growth rate of the national average, and the two Prairie Provinces of Manitoba and Saskatchewan only 1/5 of the national average.

The 1976 Census lists 23 Census Metropolitan Areas (CMA's)* in Canada, ten of which are in Ontario (Table 9). The aggregate population increase of the CMA's between 1971 and 1976 amounts to 814,600 from 11,984,400 in 1971 to 12,799,000 in 1976. This represents an annual rate of growth of 1.32%, or 2.3% faster than the Canadian population growth rate of 1.29%. The proportion of the Canadian population living in CMA's in 1976 was 55.7%, compared to 55.6% in 1971 (using 1976 boundaries for comparison) apparently indicating a stabilization of growth in the Census Metropolitan Areas.

The ten Ontario CMA's increased their aggregate population by 359,200, from 4,998,200 in 1971 to 5,357,400 in 1976 at a 1.40% annual growth rate, which was slightly below the overall provincial growth rate of 1.42% per annum, indicating a slow-down in metropolitan growth in this province. Only four CMA's had a faster growth rate than the provincial average, namely: Kitchener (2.67%), Oshawa (2.36%), Ottawa** (Ontario portion only, 1.91%) and Toronto (1.50%). Two Ontario CMA's, the only ones in Canada, experienced a decrease in population between the last two censuses; Sudbury and Windsor, where the average annual decline amounted to 0.1% over that period. The remaining four CMA's registered only moderate or very low growth rates.

* Census Metropolitan Area (Statistics Canada definition):
The main labour market area of an urbanized core (or continuous built-up area) having 100,000 or more population. CMA's are created by Statistics Canada and are usually known by the name of their largest city. They contain whole municipalities (or census subdivisions). CMA's are comprised of (1) municipalities completely or partly inside the urbanized core and (2) other municipalities, if (a) at least 40% of the employed labour force living in the municipality works in the urbanized core, or (b) at least 25% of the employed labour force working in the municipality lives in the urbanized core.

** For the purpose of this analysis, CMA Ottawa-Hull has been considered in separate units, in order to show the population trends on a Provincial basis - Ottawa in Ontario and Hull in Quebec.

Although the Toronto CMA had only a moderate rate of growth between 1971 and 1976 of 1.50% per annum, it recorded the largest numerical increase since 1971 (201,000). The disparity in annual growth rates between the Montreal CMA and Toronto CMA (0.53% versus 1.50%) resulted in Toronto CMA emerging as the largest CMA in Canada, albeit by only 600 people.

TABLE 9

Canada: Average Annual Growth Rates of the Census
Metropolitan Areas, 1971-1976

Census Metropolitan Area			Average Annual Growth Rate %	Absolute Pop. Growth '000	CMA Share of Provincial Pop. Growth (1)
Rank	Name	Province			
1	Hull	Quebec	3.37	26.3	12.7
2	Calgary	Alberta	3.10	66.6	31.7
3	Kitchener	Ontario	2.67	33.6	6.0
4	Oshawa	Ontario	2.36	14.9	2.7
5	Edmonton	Alberta	2.24	58.2	27.7
6	Victoria	British Columbia	2.20	22.5	8.0
7	Ottawa	Ontario	1.91	47.1	8.4
8	St. John's	Newfoundland	1.70	11.6	32.6
9	Quebec	Quebec	1.58	40.8	19.7
10	Vancouver	British Columbia	1.50	83.9	29.8
11	Toronto	Ontario	1.50	201.0	35.8
12	Regina	Saskatchewan	1.45	10.5	-
13	Halifax	Nova Scotia	1.35	17.4	43.9
14	London	Ontario	1.34	17.4	3.1
15	St. John	New Brunswick	1.15	6.3	14.8
16	Saskatoon	Saskatchewan	1.14	7.4	-
17	St. Catharines	Ontario	1.10	16.1	2.9
18	Hamilton	Ontario	1.02	26.3	4.7
19	Winnipeg	Manitoba	1.01	28.4	85.3
20	Thunder Bay	Ontario	0.79	4.6	0.8
21	Montreal	Quebec	0.53	73.3	35.5
22	Chicoutimi	Quebec	0.34	2.2	1.1
23	Sudbury	Ontario	- 0.09	- 0.7	- 0.1
24	Windsor	Ontario	- 0.09	- 1.1	- 0.2
Total			-----	814.6	57.2 (1)

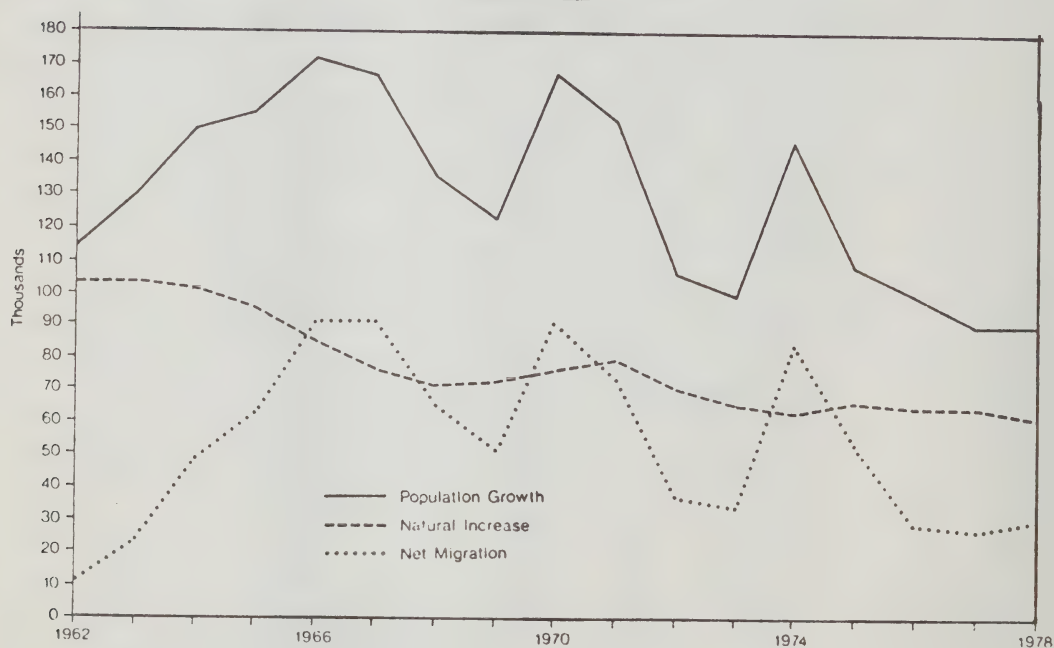
(1) Share of Canadian population growth.

Population Migration and Natural Increase

As shown in Exhibit 13 (components of population change in Ontario) natural increase has played a less significant role in recent population growth in the province. Another major contributor to the small growth experienced in recent years has been net migration. Over the years, net migration in Ontario has fluctuated significantly with very sharp declines since 1974.

As shown in Exhibit 14, the number of live births per thousand in Ontario has been declining since 1961. To date, there is no evidence of a reproductive "echo baby boom" in Ontario among the adult generation that demographers call the post war baby boom generation.

EXHIBIT 13

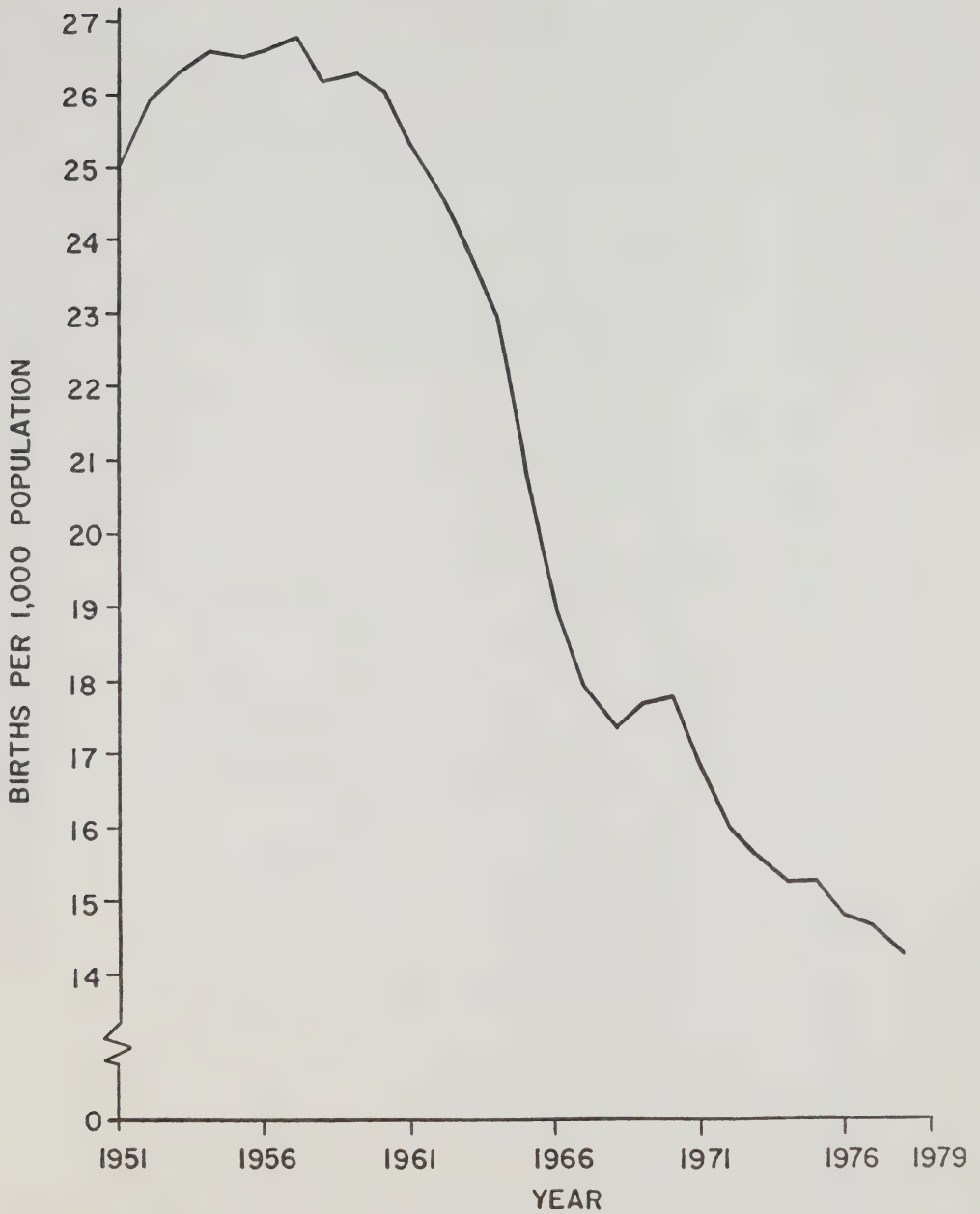


What are the origins and destinations of migrants, particularly the inter-provincial migrants? To answer this question, a 1978 analysis produced by Central Statistical Services has been used. Though the data cover only a 3-month period (January to March 1978) indications are that the data are representative of the movements of people between provinces. Exhibit 15 and Table 10 show these population flows between Ontario and the rest of Canada.

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EXHIBIT 14

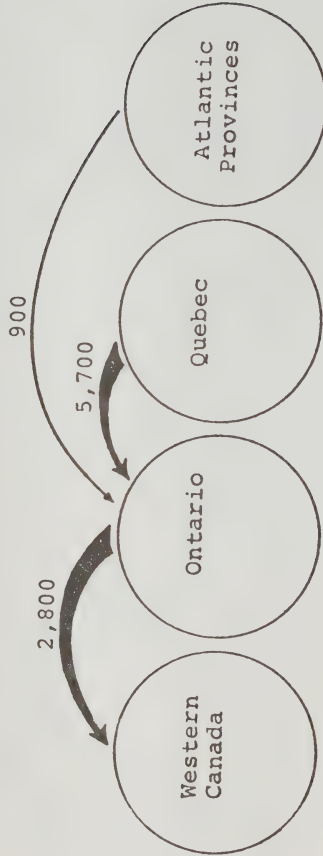
BIRTHS PER 1,000 POPULATION, ONTARIO



SOURCE: ONTARIO STATISTICS

EXHIBIT 15

Inter-Provincial Migration (Jan-March 1978)



Note: These interprovincial migration estimates are based on two sets of administrative data: (a) the "Change of Address of Driver License Holders", and (b) the "Transfer of Family Allowance Accounts". These two sets of data represent two different statistical populations, which in broad terms cover the whole population. There is some overlap in the 16 year olds but this is partially balanced by the non-coverage of adult non-drivers. With regard to timing there is also some question as to how promptly people change their driver registrations.

SOURCE: Central Statistical Services

TABLE 10

SUMMARY TABLE: NET MIGRATION BETWEEN ONTARIO
AND OTHER PROVINCES FOR MARCH AND JANUARY-MARCH 1978

Between Ontario and	March 1978		January - February 1978		January - March 1978	
	Child. Drivers*	Transfer of Cumulative	Child. Drivers*	Transfer of Cumulative	Child. Drivers*	Transfer of Cumulative
Newfoundland	14	84 98	197 60	257	211 144	355
Prince Edward Island	-1	45 44	-7 55	48	-8 100	92
Nova Scotia	-41	4 -37	32 172	204	-9 176	167
New Brunswick	3	113 116	55 104	159	58 217	275
Quebec	258	1,792 2,050	920 2,689	3,609	1,178 4,481	5,659
Manitoba	-16	171 155	6 89	95	-10 260	250
Saskatchewan	-60	-13 -73	13 4	17	-47 -9	-56
Alberta	-148	-399 -547	-462 -893	-1,355	-610 -1,292	-1,902
British Columbia	-137	-230 -367	-138 -638	-776	-275 -868	-1,143
Yukon and N.W.T.	-	34 34	10 43	53	10 77	87
Total Received	-128	1,601 1,473	626 1,685	2,311	498 3,286	3,784

*Preliminary Estimates

SOURCE: Canada Department of Health and Welfare, Transfer of Family Allowance Accounts.
Ontario Ministry of Transportation and Communications, Drivers Change of Address.

Social and Economic Data
Central Statistical Services
Ministry of Treasury,
Economics and Inter-
governmental Affairs

The estimated net exchange of migrants between Ontario and other regions of Canada during March indicates a net gain of 1,473 persons, as a result of an inflow of 2,497 immigrants, mainly from Quebec (2,050) and an outflow of 1,024 migrants, mainly to Alberta and British Columbia.

The cumulative net migration for the first three months of 1978 shows a net gain of 3,784 persons, as a result of 6,885 persons moving to Ontario (5,660 from Quebec) and 3,101 moving to the western provinces (Alberta 1,902 ; British Columbia 1,143).

The top graph on Exhibit 16 reveals that this recent net gain of inter-provincial migrants in Ontario reverses a pattern between 1974 and 1977 when Ontario actually lost net migrants to other Provinces.

Indications from past migration statistics are that this flow pattern--Quebec to Ontario, Ontario to Western Canada, and the Maritimes to Ontario--will continue until the Quebec situation is resolved and until general economic conditions improve. Since no immediate resolution is in sight for the two issues, it can be expected that the pattern described above will persist for the next few years.

Population Projection for Ontario

The current projections are based on 1976 Census data. They reflect present social and economic trends and present government policies toward immigration. The most recent projections indicate a much slower rate of growth than did those made earlier and, if birth rates continue to decline (Exhibit 14) as they are now doing and immigration from abroad remains at the rather low current levels, the population of Ontario will rise from 8 1/4 million in 1976 to just over 10 million by the year 2001 (Exhibits 16 and 17). This represents a considerable reduction in the projected growth from previous projections based on the trends of the sixties.

To put these projections in perspective it might be useful to look at them in terms of annual rates of increase. The most rapid population growth occurred in the fifties with an annual increase rate of 3.3 per cent from 1951-1956 and 2.8 per cent from 1956 to 1961. This has declined very sharply and for the

The cost factor considered is usually the out-of-pocket cost rather than the total cost of a trip as such, and particularly for the auto mode, it is usually only the gasoline cost that is considered. Left out in this cost consideration by individuals and households are such items as insurance, maintenance cost, and wear and tear. Thus, depending on the party size, trip purpose and travel distance, when these costs are compared with the cost of using other modes, the auto is most often selected. The growth in incomes (above the inflation rate) and predominance of two wage-earner households with fewer dependent children per family complicates the problem. As indicated in the section on Mobility, these costs are significantly less now (50% less) as a proportion of family income compared to 30 years ago. Thus families can afford to apply a lower weight to cost and focus on other factors such as convenience, flexibility, and protection from the weather/elements.

Although the cost of gasoline has decreased as a proportion of family income, one must keep in mind that this trend may not continue into the future. Changing national and international factors may cause this to change. The possibility of a substantial fuel price increase may affect the perception of cost of auto use.

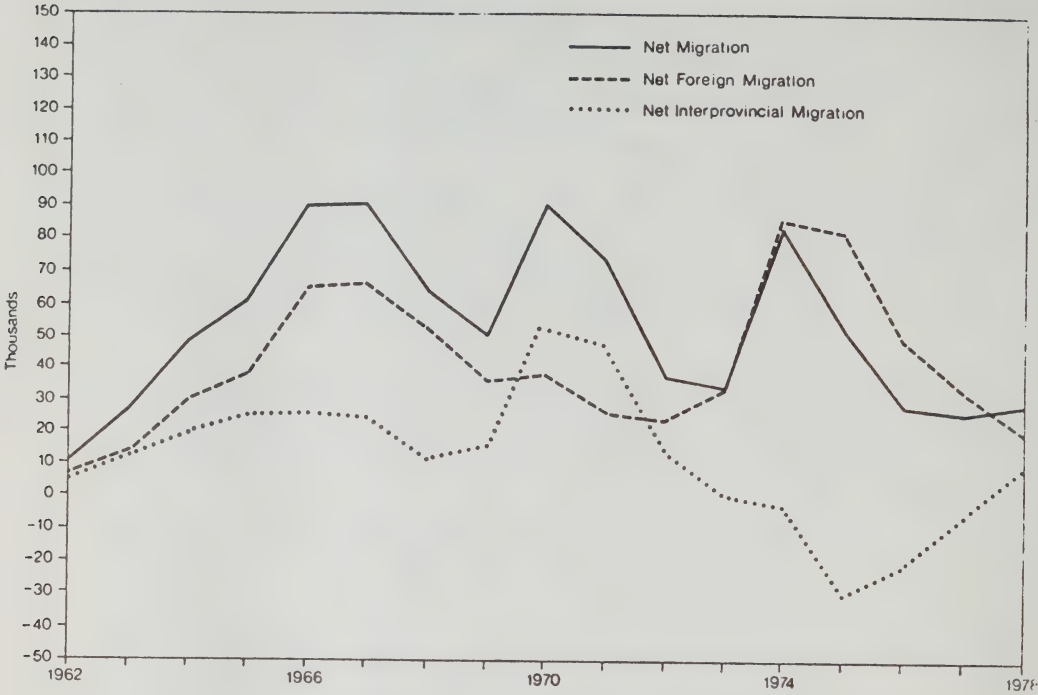
Implications for Rail

What all this means for the rail mode is that people will either use rail when they are captive, or if they are choice riders, only when their priorities in terms of flexibility, speed, convenience, travel time, protection from the elements and cost are all met. Since these factors are most often not met for individual households, the rail mode, perhaps may not be used as frequently as other modes. The ubiquity of our road and highway network; the public's attitudes toward cost relative to other factors; the psychological benefits attributed to other than rail modes; and the fact that travel and transportation consumed a relatively constant proportion of household expenditures between 1968 and 1977 perpetuates our current value system.

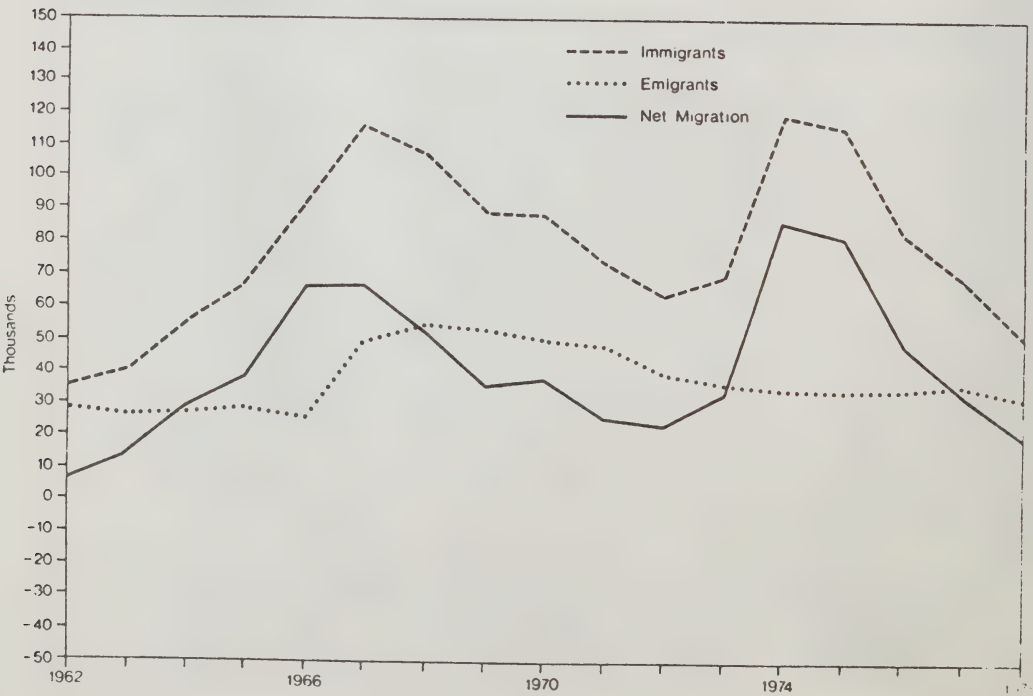
Increasing gasoline costs may affect the perception of auto use but not automatically cause people to switch to rail. Different

EXHIBIT 16

Ontario: Components of Migration, 1962-1976

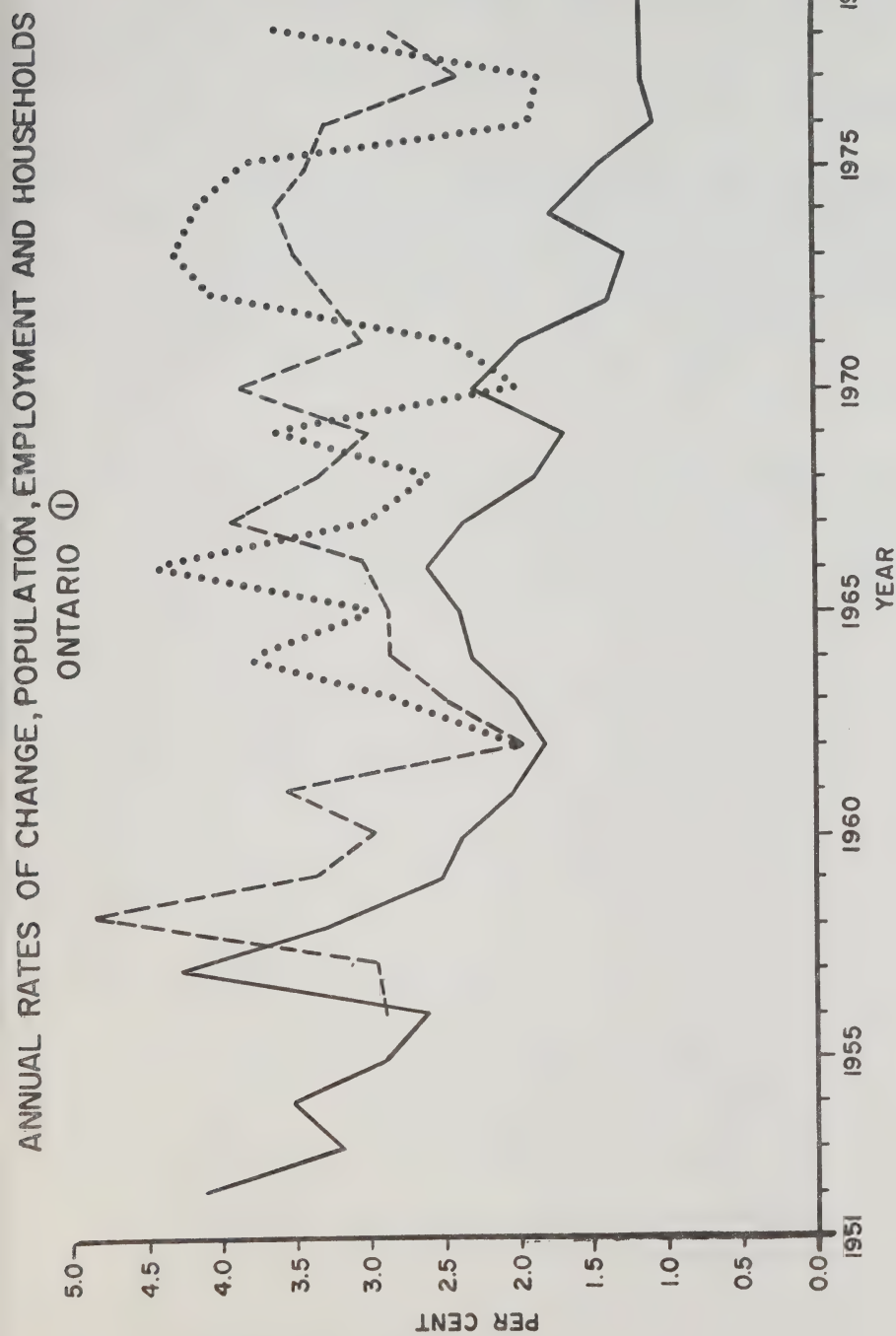


Ontario: Foreign Migration, 1962-1978



43

EXHIBIT 17



SOURCE: -- ADAPTED FROM ONTARIO MINISTRY OF TREASURY, ECONOMICS

period 1971-1976 averaged only 1.4 per cent. Because the factors affecting that decline are still at work--declining fertility and reduced immigration levels--the projections show a continuing gradual decline in the rate of population growth from now to 2001.

Impact on Rail

One significance of these demographic data for the rail mode is inter-provincial and inter-city (Ontario) migration patterns. Though a large proportion of the population do use other modes for these long distance trips (visit relatives and friends or on vacation) it is reasonable to expect that if other factors such as speed and convenience were addressed, some families would use rail for some of these long distance trips.

Ontario is not growing now as rapidly as it had been and most indications are that this will continue. Current growth rates of 0.75 to 1.25 per cent are significantly lower than at any time in the past thirty years. If current fertility, migration and mortality forecasts are correct, the follow implications for rail are suggested:

- the median aging of the population is a gradual process that likely will not significantly swell the numbers of non-auto mode (transit or rail "captive") seniors 65 years of age and over for at least two decades.
- there will be fewer young adults attending college, a proportion of which might have used rail to visit family and friends in non-local communities
- slower overall growth rates will mean lower rates of growth in public resources or revenues for all transportation and other services, including rail construction and maintenance
- the largest numerical growth in people by age group forecast over the next ten years will be those aged thirty to forty-five. Over ninety percent of all trips made by this age group are by the auto mode. Many people in this age cohort are wage earners with the income, purchasing power and travel habits that to date have seen them become very reliant upon two, three or more autos per household.

HOUSING AND RESIDENTIAL LOCATION

There are two elements involved in this lifestyle descriptor: (i) over-all housing type preferences by households and (ii) choice of residential location within urban areas by households. Knowing what behaviour patterns are emerging and what the preference scale is with respect to this subject should help us understand how certain lifestyle patterns are changing and as such provide a basis for speculating on potential transportation implications. The discussion in this section will therefore focus on these two elements.

Housing Type Preferences

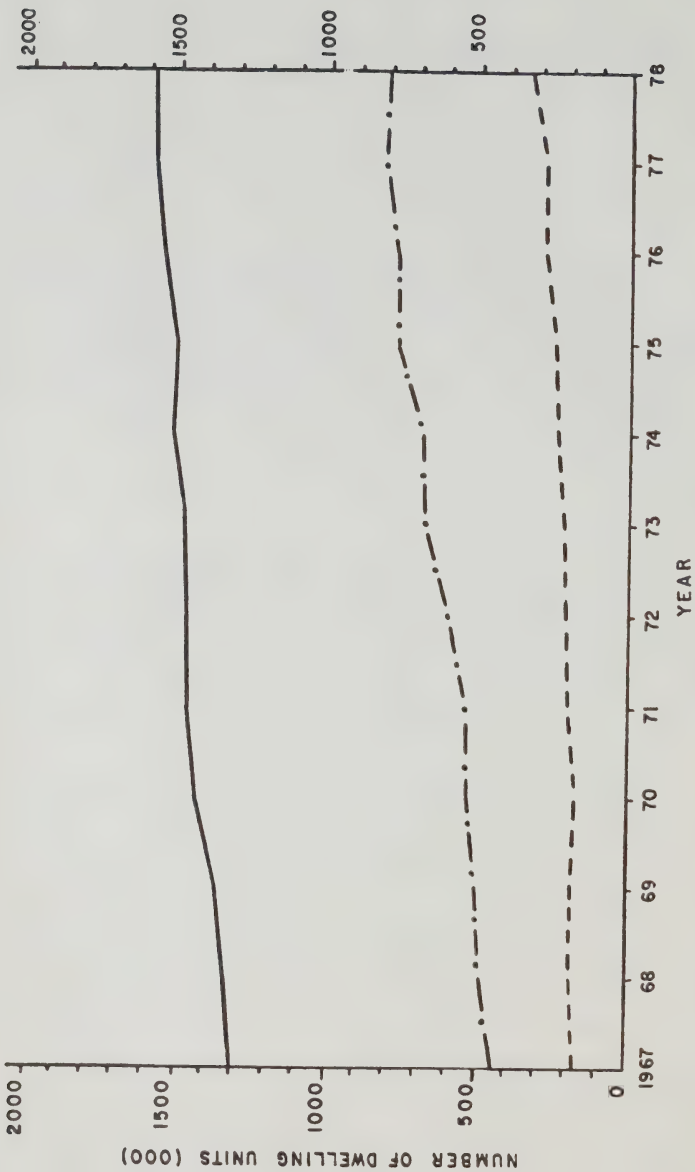
All available data on housing types indicate a continuing preference for the single (detached or attached) family dwelling. As shown on Exhibit 18, the 1967 to 1978 trends show a steady and increasing demand for single detached family units.

Estimates of future housing requirement for Ontario (Table 11) show that over one million units will be needed to house the population by 2001. However, the data indicates that of that amount, approximately 68% will be needed by or before 1991. A breakdown of these future requirements by type of unit supports the 1967 to 1978 pattern --- continuing demand and preference for single family units.

Choice of Residential Location

To be useful, the analysis of this particular element has to be done either at the municipal scale or at the metropolitan scale. The purpose is to make detailed observations of shifts not only in housing type but in specific locations within each urban area or each metropolitan region. Because of time constraints it was not possible to carry out an analysis of all urban centres in the province. As such a detailed analysis of six major Census Metropolitan Areas was carried out for this Study. These areas include Toronto, Ottawa, Hamilton, London, Kitchener and Windsor. It is

EXHIBIT 18
CONTINUATION OF DEMAND FOR AND SUPPLY
OF SINGLE FAMILY UNITS, ONTARIO



SOURCE: SC, HOUSEHOLD FACILITIES & EQUIPMENT, 1979

- SINGLE DETACHED
- - - SINGLE ATTACHED
- . - . - APARTMENT OR FLAT

TABLE II

PROJECTED FUTURE DEVELOPMENT POTENTIAL 1976 - 2001
FOR POPULATION ① AND HOUSING UNITS IN ONTARIO

REGION		"ADD ON" GROWTH (1976 - 2001)	"ADD ON" GROWTH (1976 - 1991)	PERCENTAGE OF PROJECTED "ADD ON" GROWTH 1976-2001 REALIZED by 1991	"ADD ON" GROWTH (1976 - 1991) AS A % OF TOTAL yr. 2001 PROJECTION
<u>CENTRAL</u>	POP.	1,274,714	890,330	69.8	14.1
	HOUSING	1,084,000	706,000	65.1	26.1
<u>SOUTHWESTERN</u>	POP.	266,824	183,024	68.6	12.1
	HOUSING	206,000	143,000	69.4	23.9
<u>EASTERN</u>	POP.	173,104	137,071	79.2	10.4
	HOUSING	199,000	143,000	71.9	26.0
<u>NORTHERN</u>	POP.	82,306	65,963	80.1	9.9
	HOUSING	104,000	76,000	73.1	27.3
<u>NORTHWESTERN</u>	POP.	24,052	19,994	83.1	7.8
	HOUSING	17,000	16,000	94.1	19.7
<u>TOTAL</u>	POP.	1,821,000	1,296,382	71.2	12.9
	HOUSING	1,603,000	1,095,000	68.3	26.1

- ① LOW FERTILITY;
30,000 NET EXTERNAL MIGRATION PER ANNUM;
INTERNAL MIGRATION AT 0.54 PER CENT OF ONTARIO POPULATION

SOURCE: BARNARD ASSOCIATES, ONTARIO HOUSING REQUIREMENTS, 1976 - 2001
[FEBRUARY 1977]

MINISTRY OF TREASURY AND ECONOMICS, ONTARIO POPULATION PROJECTION, 1976 - 2001
[OCTOBER 1978]

believed that knowledge gained from these six centres will be representative of the behaviour pattern across the province.

Each of the six CMAs was divided into two major parts: (i) a central area including the downtown(s) and more mature areas of the CMA, and (ii) the suburban area. Data at the Enumeration Area level was used for this spatial determination. A review of population growth and shifts in these centres show that the central/core areas lost population between 1971 and 1976 (Table 12) even though almost all the centres (except Windsor) experienced significant growth in that time period. The greatest losses occurred in Toronto as shown on Table 13. Toronto had a net loss of 116,000 people to Durham, Halton, Peel, and York.

TABLE 12

Central Area - Suburban Population Change: Major CMAs 1971-1976
(000)

CMA	AREA	1971	1976	# /71-76	*** /71-76
1. Toronto	Central	727	652	-75	-10.3
	Suburban	1,875	2,151	+276	14.7
	Total	2,602	2,803	+201	7.7
2. London	Central	109	98	-11	-10.4
	Suburban	144	172	+29	20.0
	Total	253	270	+17	6.9
3. Windsor	Central	132	117	-15	-11.5
	Suburban	117	131	+14	12.0
	Total	249	248	-1	-0.5
4. Kitchener- Waterloo	Central	94	88	-6	-5.9
	Suburban	145	184	+39	27.0
	Total	239	272	+33	14.1
5. Ottawa	Central	113	97	-16	-13.8
	Suburban	507	596	+89	17.5
	Total	620	693	+73	-11.8
6. Hamilton	Central	119	104	-15	-12.5
	Suburban	384	425	+41	10.7
	Total	503	529	+26	-5.2

* Percentages based on actual population figures.

Source: Statistics Canada, 1971 and 1976 Census.

Legend for Table 12

Description of Central Areas Boundaries

1. Toronto Lake Ontario, Keele St., Weston Rd., Eglinton Ave.,
Don River, Woodbine Ave.,
2. London Hwy. 126, Highbury Ave., Kidd's Lane, Thames
River, Beechwood Ave., Thompson Rd.,
3. Windsor Detroit River, Norman Rd., E.C. Rowe Ave., Huron
Church Rd., Malden Rd., Alberta Rd.,
4. Kitchener-
Waterloo Laurel Creek, Grand River, Ebydale, Ottawa Rds.,
Fisher Rd., Queen's Blvd., King North, University
Ave.,
5. Ottawa Ottawa River, Rideau River, Bronson Rd., Carling
Ave., Parkdale Ave.,
6. Hamilton Lake Ontario, Parkdale Ave., C.N.R., Ottawa Rd.,
Escarpment, Wentworth Ave., Mohawk Rd., West 5th St.
Queen St.,

TABLE 13

POPULATION FLOWS BETWEEN METRO TORONTO
AND SURROUNDING REGIONAL MUNICIPALITIES :
1971 AND 1976 (POPULATION 5+ YEARS ONLY)

REGIONAL MUNICIPALITY	MOVED INTO METRO TORONTO		MOVED OUT OF METRO TORONTO		NET LOSS FROM METRO TORONTO	
	#	%	#	%	#	%
DURHAM	5,925	22.0	25,110	18.0	19,185	17.0
HALTON	3,405	12.0	15,005	10.0	11,600	10.0
PEEL	9,375	35.0	68,080	47.0	58,705	50.0
YORK	8,385	31.0	35,555	25.0	27,170	23.0
TOTAL	27,090	100.0	143,750	100.0	116,660	100.0

NOTE:-(i) APPROXIMATELY 70% OF THE NET LOSS FROM METRO
TORONTO OCCURED IN THE CITY OF TORONTO.

(ii) THIS PHENOMENON IS OCCJRING IN OTHER MAJOR URBAN
CENTRES SUCH AS HAMILTON, LONDON, OTTAWA & WINDSOR

SOURCE: STATISTICS CANADA, 1976 CENSUS MICROFICHE SODEM 831,
MTPB, METRO/TTC POLICY COMMITTEE REPORT, AUG.15 th 1979, TABLE 3.

Relating population shifts to total growth in dwelling units for these six CMAs show a pattern similar to population shifts (Table 14). Growth in housing stock between 1971 and 1976 in absolute numbers was greatest in Toronto though in percentage terms growth was greatest in Ottawa and Kitchener.

Indications are that all these new developments and new housing construction in these suburbs are in large part single family dwelling units. Future estimates point to the continuation of this trend, at least in the short term.

Thus, in summary two things can be observed: (i) continued strong preference for single family dwelling units and (ii) population shifts from central areas to the suburbs.

Urban "Gentrification"

There is widespread misinformation that there is an extensive process of urban "gentrification" occurring in the downtowns of major North American cities. This idea suggests that more people are attempting to locate in downtown areas or at least in near-downtown areas that have easy access to public transit for work trips. Typically such upwardly - mobile young professionals or already affluent middle-age executives are a new urban elite less dependent on cars not only for local work trips but also for all trips in general.

Evidence from Canadian real estate companies, the preliminary 1980 United States' census, and the assessment information of the Ontario Government suggests that this visible highly - publicized trend is statistically not large. The one or two adults and possibly one child that may typify this new urban gentry often displace a formerly larger number of boarders, lodgers or families in a single downtown home when they renovate. As of January of this year there was a year and a half oversupply of homes of all types in downtown Toronto. In net terms the downtowns of most metropolitan areas in Ontario continue to lose population. Moreover, many of these affluent professionals or executives have high rates of utilization of leased, corporate and privately owned automobiles.

TABLE 14
DWELLING UNITS BY CMA's

1971-76

AREA	1971 D.U.'S (000'S)	1976 D.U.'S (000'S)	Δ 71-76	% Δ	% Δ PER YEAR
TORONTO:					
CENTRAL	81.4	85.1	3.7	4.6	.9
SUBURBAN	692.3	824.3	131.9	19.1	3.8
TOTAL	773.8	909.5	135.7	17.5	3.5
OTTAWA:					
CENTRAL	37.7	38.9	1.2	3.2	.6
SUBURBAN	94.4	135.3	40.9	43.3	8.7
TOTAL	132.1	174.3	42.1	31.9	6.4
HAMILTON:					
CENTRAL	43.8	44.4	.6	1.5	.3
SUBURBAN	102.4	128.0	25.6	25.0	5.0
TOTAL	146.2	172.5	26.2	18.0	3.6
LONDON:					
CENTRAL	17.9	19.0	1.0	5.9	1.2
SUBURBAN	60.5	72.7	12.1	20.1	4.0
TOTAL	78.5	91.7	13.2	16.9	3.4
KITCHENER:					
CENTRAL	21.1	22.7	1.6	7.4	1.5
SUBURBAN	45.4	65.1	19.7	43.5	8.7
TOTAL	66.5	87.8	21.3	32.0	6.4
WINDSOR:					
CENTRAL	28.9	29.3	4.2	1.5	.3
SUBURBAN	42.2	50.8	8.5	20.2	4.0
TOTAL	71.2	80.1	8.9	12.6	2.5

In summary, urban "gentrification" is not a large phenomenon numerically. It may become more so as energy prices increase dramatically, but even if this happens, it may not signal large numbers of large households suddenly appearing in our downtown areas. Per capita trip generation rates could be somewhat higher for such smaller households, however. In addition, resettlement or infilling often encourages local political pressure for downtown rail track relocation and/or abandonment.

Implications for Transportation

The next question is what do these trends mean in terms of transportation in general and for rail in particular? Previous studies by MTC and others indicate that there are correlations between housing type preferences, spatial residential location and travel behaviour. It is possible that those earlier observations are also applicable here.

Thus, the implications for transportation can be summarized as follows:

- Continued population shifts to suburban and ex-urban areas perpetuate dependence of households/families on the auto particularly for work and shopping trips since many of these activity nodes are still concentrated in the downtown areas of urban regions, distant from suburban and ex-urban residences.
- Relatively stable or declining percentages of ridership for transit services because they are not usually available in many suburban or remote areas of certain municipalities due to factors such as low density development, street pattern, and auto dependence.
- Increased spatial separation of residences from work places.
- Increased spatial distance and walking time between the portals of single family houses and bus transit stops are common in cul-de-sac, curvilinear or similar street layout subdivisions.
- Spatial segregation of land uses (shopping and work places not integrated with residential districts) associated with single family dwellings require the use of a convenient, at hand personal mode of transportation for families.

The specific implications for rail of a continuation of these trends and forecasts include:

- . Lower population densities in built-up urban areas that reduce urban transit and commuter rail ridership potential.
- . Smaller household sizes overall should reduce the per hectare ridership potential of suburban and urban transit systems as well as inter-municipal commuter rail service.
- . With a suburbanization of manufacturing into industrial parks distant from the homes of both suburban and downtown dwellers, there is much more cross commuting and two-way utilization of the existing urban road network. In short this means more suburb - suburb and downtown-suburb work trips in the a.m. peak. Such trips cannot be made by commuter rail except with excellent widespread co-ordination with local transit authorities.
- . As suburban and ex-urban development extends the spatial field of an urban place, leapfrogging some areas and infilling others, there will be more and more demands for commuter rail over ever longer trip lengths to serve largely low density residential areas.
- . A number of existing rail corridors in built-up urban places are not suitably aligned to link recreational complexes with residential areas or to link work places with homes.
- . Urban "gentrification" (as discussed above) is not a significant phenomenon today. If it does become so tomorrow, there are both threats and opportunities for commuter rail service.

FAMILY FORMATION & STRUCTURE*

Preamble

Of all the world's institutions, none is more important to more people than the family. The term "family" has almost as many meanings as there are individuals in society. All of us, except for a very few professionals, base our understanding of "family" upon personal experience. And that personal experience is changing, at an ever-faster rate.

Over the last 25 years, trends in social changes have intensified: more wives and mothers are working full-time. More couples are getting divorced. More single-parents are raising families. More families are moving away from their roots, away from the support and co-operation of the aunts and uncles and grandparents who formed an integral part of the traditional extended family.

Social pressures on the family have become a way of life: social acceptance of non-traditional patterns has been broadened; economic pressures have affected the work force, including wives and mothers; family planning methods and information have been made almost universally available; legal modifications have underlined divorce as a route for dissatisfied marriage partners to take; and Ontario as a Province has received the impact of a rich variety of cultural and ethnic traditions. While some changes have offered increased personal fulfillment to family members and have often enhanced family life, they have also contributed to a sense of uncertainty about the status and future of the family in society.

The Family: Definition, Formation and Changing Structure

The word "family" comes from the Latin word familia, meaning household. Under Roman Law, the family was an entity excluded from legal regulation. The law recognized only the head of the family. This sanctity under the law has been maintained for centuries.

*

Adapted from Margaret Birch, The Family As a Focus For Social Policy, Draft Paper, April 1979.

Ontario's basic legal system is premised on English common law. Hence, in Ontario, as in many Commonwealth countries, when a man and a woman married, they ceased to have independent or separate legal identities. The identities merged. It was said that the husband and wife become one in law. Persons disenchanted with the law would add that the husband was that one!

During the development of industrialized society in the Western world, the whole institution of the family and the role of its members underwent profound changes. It was during this time that the "nuclear" family of male wage-earner, female housekeeper and dependent children living together in a separate residence became so prominent in the public mind. Although this is still the accepted and traditional norm in Ontario, it is of very recent origin and has really no more validity than the clan or kinship style of family life that pre-dated it and still exists in many countries outside North America.

What gives the nuclear family its weight in North America is its social credence and legislative legitimacy. The familiar extended family of aunts and uncles and grandparents is equally important in Ontario but perhaps not so clearly recognized.

The constant changes within society make changes in family structures inevitable. But the proven tenacity of the family unit indicates that it will survive. Family structure, however, is increasing complex and different from traditional forms. At present these are the different family forms recognized in Ontario

Legislation:

- . A married couple with one or more children under 18;
- . A single parent with one or more children under 18;
- . A married couple with no children or no children under 18;

- . An unmarried couple living together in a marriage relationship with or without children under 18;
- . Children 18 years and older and their parents;
- . Brothers and sisters and their descendants, aunts and uncles and their descendants, and grandparents.

These relationships could be traced through a marriage, blood or adoption. In some cases, a foster child and foster parents could be included.

The above discussion suggests that over time the general concept of the family is changing. The following pages document and summarize the trend. Trends in family formation and structure can be analysed by reviewing the following factors: marriage, divorce, fertility and birth rates, single parent families, life expectancy, working mothers and working wives.

Marriage

The number of marriages in Ontario has been declining since 1971. In that year the rate of marriages was 9.0 per 1,000 population. By 1977 the rate dropped to 8.1 per 1,000 population (Table 15).

TABLE 15
MARRIAGE RATES FOR ONTARIO
1971-1977

MARRIAGES (PER 1,000 POPULATION)							
1971	1972	1973	1974	1975	1976	1977	% /71 - 77
9.0	9.2	9.1	9.0	8.8	8.4	8.1	-10.0

Source: 'Ontario Statistics' (1979) Table 4.7

Divorce

The divorce rate in Ontario is rapidly increasing. It has risen from 158.5 per 100,000 of population in 1971 to 224.9 in 1976 (Table 16). A year later, the rate jumped to 235.7, representing an increase of 48.7 percent during the period between 1971-1977. One out of four marriages in Ontario ends in divorce. For example, in 1976 there were 69,364 marriages and 18,589 divorces.

TABLE 16
DIVORCES AND RATES IN ONTARIO
1971-1976

Year	Number	Rate Per 100,000 Population
1971	12,211	158.5
1972	13,190	168.6
1973	13,781	173.6
1974	15,277	188.7
1975	17,485	212.6
1976	18,589	224.9

Source: Statistics Canada, Vital Statistics Vol. II 1976,
Catalogue 84 - 205 Annual, Table 11, pp. 28 - 29.

Births

Birth rates in Ontario have fallen in recent years. Families and single parents are choosing to have fewer and fewer children. In 1971, births averaged 16.9 per 1,000 population. By 1976, the figure was down to 14.8 per 1,000 population. Family size measured by the number of children has decreased correspondingly: 1.6 children per family in 1971, compared to 1.4 in 1976 (Table 17).

Besides birth rates, total fertility rates and gross reproduction rates have also been declining since 1971 and are expected to continue doing so in the future (Table 18). However, it should be noted that despite a reduced birth rate, the number of families with no children has remained relatively constant for census years between 1961 and 1976. (Table 19) Over this same period, there has been a decline in 3 and 4 children families but a corresponding increase in 1 and 2 children families.

TABLE 17
BIRTH RATES & FAMILY SIZE: ONTARIO 1971/76

Year	Total Live Births	Birth Rate Per 1,000 Population	Average No. Of Children Per Family
1971	130,395	16.9	1.6
1976	122,700	14.8	1.4

Source: Statistics Canada, 1971 & 1976 Census

TABLE 18
TOTAL FERTILITY RATES AND GROSS REPRODUCTION RATES,
ONTARIO, 1971 - 1976 AND PROJECTIONS FOR 1981, 1986

Year	Total Fertility ¹ Rate	Gross Reproduction ² Rate
1971	2.22	1.08
1972	2.05	0.99
1973	1.96	0.95
1974	1.88	0.92
1975	1.84	0.90
1976	1.77	0.87
1981	1.66	0.81
1986	1.58	0.77

1. Total Fertility Rate (TFR) is the number of children a woman will have throughout her lifetime if she experiences at each age the fertility in effect during the period concerned.
2. Gross Reproduction Rate (GRR) average number of live daughters that would be born to a hypothetical female birth cohort if subjected to current age-specific fertility rates and assuming that mortality before age 50 is zero.

A rate of 1.00 indicates replacement, a rate above unity indicates that the population is more than replacing itself and a rate below unity means that the population is not replacing itself.

Source: Central Statistical Services Ministry of Treasury and Economics, December 1978.

TABLE 19
ONTARIO: CHILDREN IN FAMILY, CENSUS YEARS,
1931 - 1976
PER CENT OF TOTAL FAMILIES

CHILDREN IN FAMILY					
YEAR	0	1	2	3	4+
1951	36.1	25.2	20.4	9.8	8.5
1961	31.5	21.3	21.8	13.1	12.3
1966	30.4	20.1	21.8	13.9	13.8
1971	31.6	21.1	22.1	13.3	11.9
1976	30.9	23.8	24.5	12.6	8.2

Source: Central Statistical Services
 Ministry of Treasury and Economics,
 December 1978

Single - Parent Families

More women are choosing to live alone as single parents. This rapid increase in the number of single-parent families has been the result of the increase in divorces and of unwed mothers keeping their babies. In 1976 there were 202,350 single-parent families in Ontario. This was 9.6% of all families in the province and accounted for 11.8% of all children. Of the total number of single-parent families, 83.2% were led by women. (Table 20)

TABLE 20
Lone-Parent Families Showing Marital
Status by Sex of Parent, Ontario 1976

Marital Status	Total	Male	Female
All	202,455	34,000	168,455
Married Spouse Absent	10,245	4,475	5,775
Separated	62,645	10,445	52,200
Widowed	74,825	11,780	63,050
Divorced	40,750	5,880	34,875
Unmarried	13,980	1,420	12,560

Source: Statistics Canada, 1976 Census of Canada
 Microfiche No. CTFAMA24

Life Expectancy

Life expectancy is probably the most fundamental of all statistics, both from an individual and from a family point of view. Recently noted changes in life expectancy are having significant impact on family life. As indicated in Table 21 a male child born in 1951 could expect to live 66.9 years. By 1971 this expectation had risen to 69.5 years – an increase of two and a half years. On the other hand, a female child born in 1951 could expect to live 71.9 years. By 1971 this had increased to 76.8 years – an increase of almost five years. (Table 21)

TABLE 21
Life Expectancy at Birth by
Sex, Ontario 1951 – 1971

Year	Life Expectancy in Years	
	Male	Female
1951	66.87	71.85
1961	68.32	74.40
1971	69.55	76.76

Source: Statistics Canada, Canada Year Book
1976-77, Table 4.47, p. 208

Working Wives

The number of working wives has increased dramatically during the last few years. Between 1961 and 1976 the proportion of wives in the Ontario labour force increased from 20.2% to 47.5%. In general, female participation in the labour force has also increased significantly over the period of the past two decades: from 26.6% in 1951 to 53.6% by 1979. (Table 22)

Furthermore, statistics from the 1961, 1971, and 1976 Census indicate that the number of families in which both husband and wife were working increased from 27% in 1961 to 48% in 1971 and to 54% in 1976. This means that the number of wives working in Ontario has doubled within the last fifteen years.

TABLE 22
MALE/FEMALE PARTICIPATION RATE FOR ONTARIO
1951 to 1979

YEAR	MALE	FEMALE	TOTAL
1951	85.7	26.6	56.1
1961	81.1	32.9	56.9
1971	80.3	44.3	62.1
1976	77.2	48.0	62.3
1978	80.1	51.5	65.5
1979	80.4	53.6	66.7

Source: Statistics Canada
 94 - 702
 94 - 802

Working Mothers

Not only wives but mothers are also being increasingly employed. In fact, the number of working mothers whose children are of school age is growing. In 1967, 32% of mothers with children of school age were working. By 1973, the proportion was 47%. All indications are that this figure will continue to increase, given the present economic conditions and cost of living.

Summary

- more people are living in a family situation: 85.7% in 1951 and 86.2% in 1976
- families still choose to have children: in 1951 36.1% of families had no children; in 1976 it was only 34.3%
- family size is declining: 1.6 children per family in 1961 but 1.4 in 1976
- almost half of mothers with school-age children work outside the home: 47.1% in 1973
- Over half of all families have both spouses working: 54% in 1976
- one in every four marriages in Ontario end in divorce: the rate has risen from 3.3 per 100,000 of population in 1921 to 224.9 in 1976
- of Ontario's children one in ten live in single-parent families: 11.8% in 1976

Potential Transportation Implications:

These statistics support the notion that the traditional family, as we once knew it, is changing quite rapidly. These changes do have some transportation implications. Those implications are discussed briefly below, including the following:

- There should be more trips per capita with the increase in single parent families to satisfy basic needs and wants of families
- potential growth in auto ownership, driver population and total annual miles travelled with both spouses working
- with decreasing number of dependent age children, more time will be available to couples for other activities
- potential increases in work trip volume as more wives and/or mothers enter the labour market
- possible peak hour congestion and demand for more highway capacity
- greater consumption of transportation energy, both total and per capita (all other things held constant).

Rail Implications

With smaller families, more working couples, and increased numbers of single parent families, there will be increased traffic to work. This represents a possible increase in demand for commuter rail transportation. With more couples in the work force, options that allow a spouse to use "kiss and ride" transit/rail service may be an alternative to two auto trips to work, one for each working spouse. Such initiatives would have to incorporate the kinds of levels of service, comfort convenience and other factors that generate support for and reliance upon one mode rather than another.

Smaller families and childless families may have more time available for leisure, recreational, and other non-work activity. While some single parent families may not have the time and money available for recreation, others with more of both resources may look toward specialized high level of service recreational rail activities. This potential is limited by the fact that the most popular forms of outdoor leisure such as swimming, recreational driving, walking and others, are more appropriate to modes other than rail.

MOBILITY

The analysis of this lifestyle descriptor will focus on four major aspects of travel characteristics by Ontario residents: (i) trends in auto ownership, (ii) annual vehicle miles or kilometres travelled, (iii) work trip mode choice, and (iv) modal share of inter-city travel.

Trends in Auto Ownership

Exhibit 19 shows that auto ownership by Ontario households is continuously increasing. Though there have been modest increases in the number of 4 and 6 cylinder vehicles purchased by Ontario residents since 1976, the overall preference is for the 8 cylinder auto. Ownership of 8 cylinder vehicles has been increasing steadily and there appears to be no levelling off to date. The majority of Ontario residents do not believe that there is or could be an energy crisis now or in the immediate (five year) future.

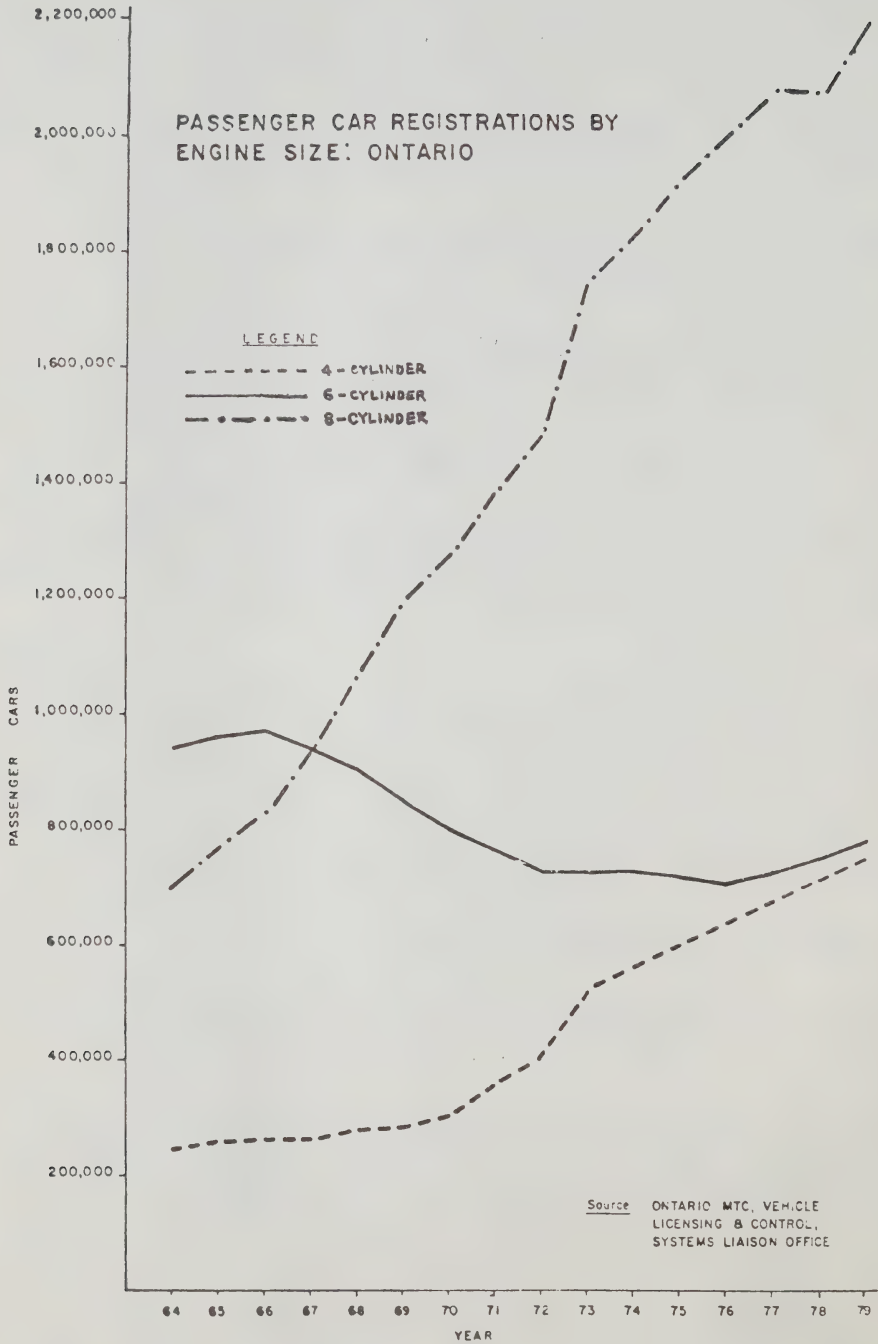
Overall vehicles per capita and vehicles per household (Exhibits 20 & 21) show similar trends. Trends of the ownership of other types of vehicles such as trucks and trailers are also on the increase even though our population growth rate appears to be levelling off. This behaviour pattern and preferences could be explained in part by affluence and growth in household income levels.

Annual Vehicle Kilometres Travelled

Just as auto ownership rates in Ontario have been on the increase so also has the total distance travelled per year per person.

Table 23 shows a 29.4% and 25.8% increase respectively in total kilometres travelled by Ontario residents on municipal roads and on provincial highways between 1971 and 1978.

EXHIBIT 19



VEHICLE PER CAPITA RATES IN ONTARIO, 1955 - 1979

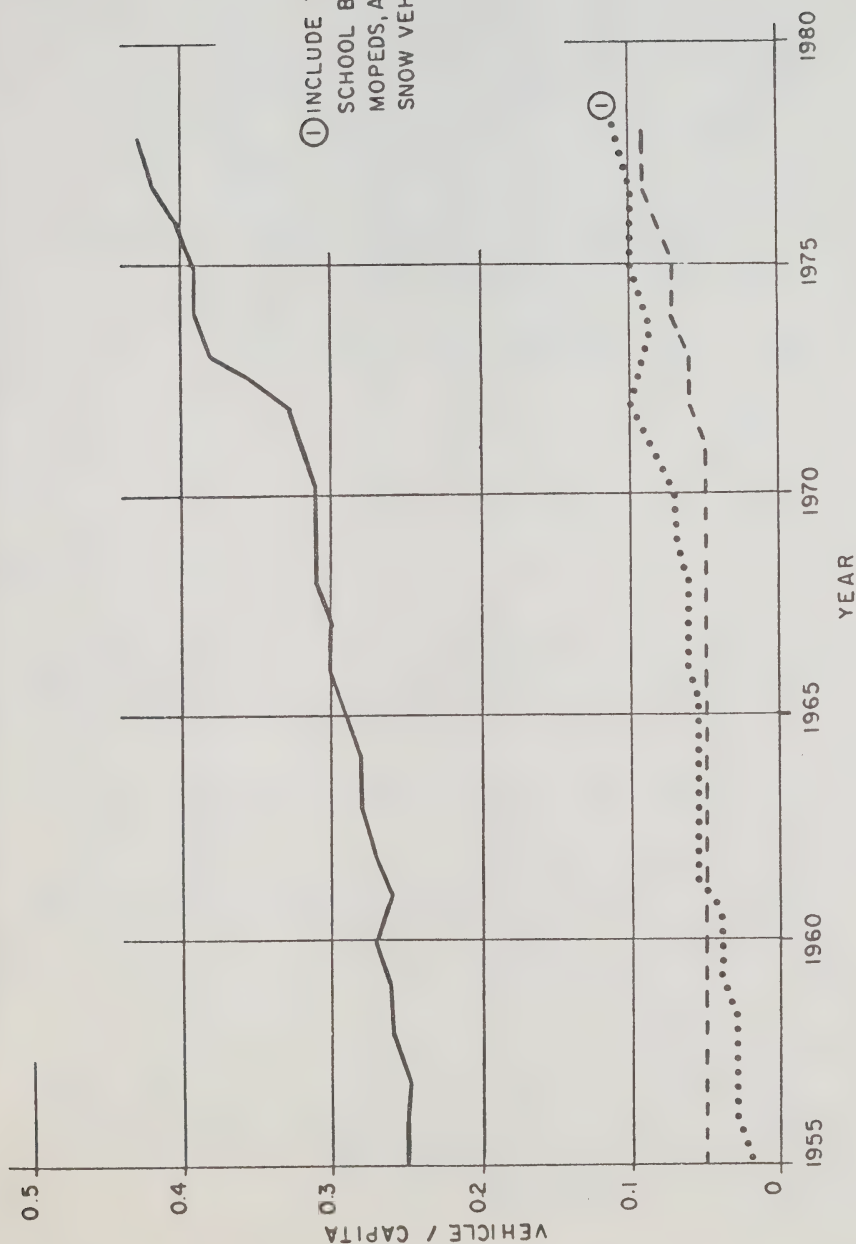
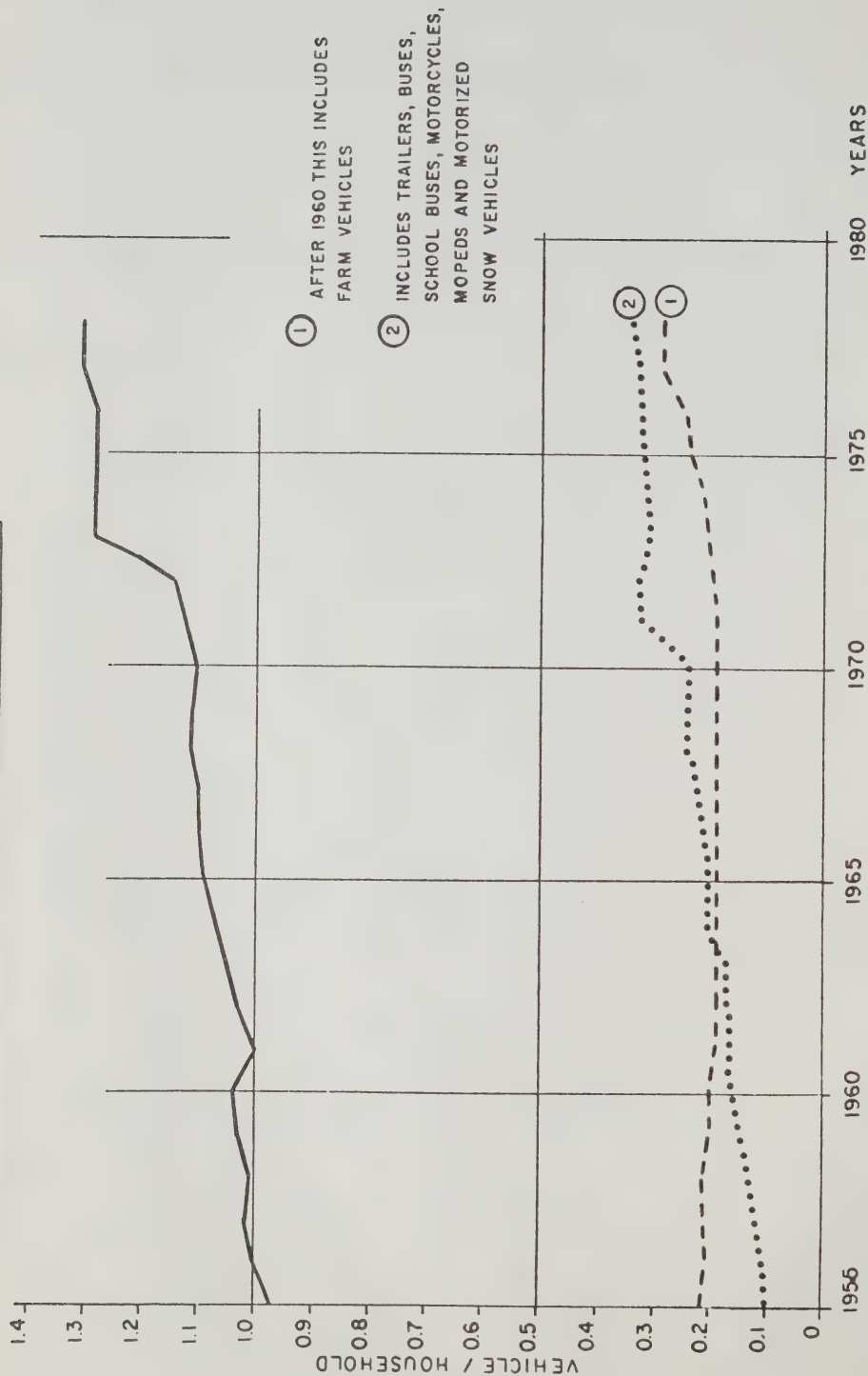


EXHIBIT 21

VEHICLE PER HOUSEHOLD RATES IN ONTARIO



SOURCE: MTC/URTPO, LICENSING & CONTROL BRANCH.

TABLE 23

ANNUAL PER CAPITA VEHICLE KILOMETRES TRAVELLED
FOR ONTARIO-1971, 1976 & 1978

TYPE	1971	1976	1978	Δ /71-/78	% Δ /71-/78
PROV. HIGHWAYS	3100	3650	3900	800	25.8 %
MUNICIPAL	3400	4200	4400	1000	29.4
ALL ROADS	6500	7850	8300	1800	27.7

SOURCE: (1) PROVINCIAL ROADS OFFICE - SUMMARY OF
TRAVEL EXPERIENCE AND ACCIDENT DATA (1979)
(2) CANADA CENSUS (1971 & 1976)
(3) ONTARIO MUNICIPAL DIRECTORY 1979
(ASSESSMENT 1978) PAGE 100

Work Trip Mode Choice

A comparison of 1976 and 1977 mode choice for the work trip reveals some startling observations. The following can be summarized by reviewing the data on Table 24:

- . The automobile accounts for seven work trips in ten in either year.
- . The proportion of those driving alone to work increased from 49.2% in 1976 to 51.5% by 1977.
- . those riding as passengers decreased from 14.3% in 1976 to 13.8% in 1977.
- . A major observation from this Table is that the proportion of those taking public transit declined significantly from 18.2% to 16.7%.

TABLE 24
MODE OF TRANSPORTATION: COMMUTERS
IN ONTARIO 1976-1977

MODE	1976	1977
1. AUTOMOBILE	70.8 %	72.1 %
DRIVING ALONE	49.2	51.5
DRIVING WITH PASSENGER(S)	7.3	6.8
RIDING AS A PASSENGER	14.3	13.8
2. PUBLIC TRANSPORTATION	18.2	16.7
3. WALKING	8.7	9.4
4. OTHER	2.3	1.8
TOTAL COMMUTERS	3,226,000 = 100 %	3,296,000 = 100 %

SOURCE: -STATISTICS CANADA, TRAVEL, TOURISM & OUTDOOR RECREATION
CAT. 66-202, 1975/1976 & 1976/1977

Modal Share of Inter-City Travel

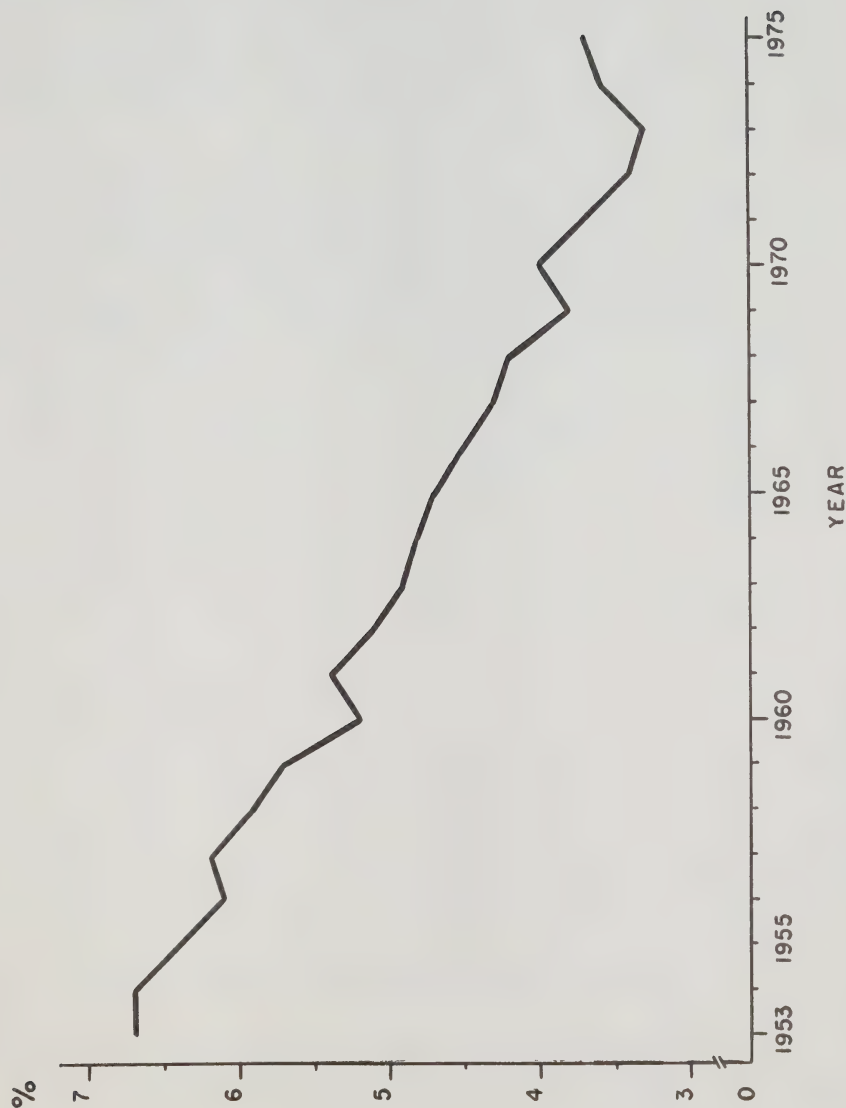
A review of the data on Exhibit 28 reveals an overwhelming domination of the auto mode, even for inter-city travel of relatively long distances. The statistics show that the automobile accounted for 60% of the trips from Toronto to Sudbury, 78% to Windsor, 83% to London, 76% to North Bay and 56% to Ottawa.

Considering total annual trips within Ontario (Table 37) the modal shares are distributed as follows: auto 90.9%, bus 3.8%, air 1.7% and rail 1.1%. The overwhelming preference for the auto mode thus becomes quite evident.

This preference for the use of the auto mode can be explained in part by Exhibit 22. This exhibit shows that the cost of operating an auto as a proportion of total family income is approximately half of what it was about twenty years ago. In addition to other factors such as flexibility of routing, convenience and costs of operation, the rail mode does not appear to be competitive with the automobile. Given past and immediate trends, this pattern is not expected to change significantly in the near future.

EXHIBIT 22

ANNUAL COST OF GASOLINE AS A % OF AVERAGE FAMILY INCOME



SOURCE: MTC, SYSTEMS PLANNING BRANCH, IMPLICATIONS OF ENERGY SHORTAGES ON TRANSPORTATION IN ONT. P. 70

Implications for Rail

The auto, and particularly the eight cylinder auto, is the dominant mode of transportation in Ontario. While history is not destiny, the future does stem from today's realities. There appears to be few if any cumulative groupings in lifestyle trends (including value system, energy, housing and residential location, work/employment, and family formation and structure) that could result in massive attitudinal changes that would divert people from their cars to other modes such as rail.

The cumulative historical policies of governments reflect this public preference for the automobile. A widespread municipal street and provincial road system is in place. Current and forecast energy prices are still below today's world levels. Government regulations on average fleet consumption of energy increase the fuel efficiency of the auto. Moreover, governments at all levels encourage the continuing viability of auto assembly and auto parts production as the first and third most important industries in Ontario.

RESOURCE ALLOCATION

The analysis in this section is focused on two major resources of households/families: Income and time. Resource allocation is a lifestyle variable and knowing how it is changing should give some indications of shifts in preferences, value systems and priorities.

Income

Overall personal disposable incomes of Ontario residents have been increasing faster than the inflation rate. As Table 25 indicates, personal disposable incomes (PDI) increased from approximately \$24.6 million in 1971 to \$55.1 million by 1977; an increase of \$30.5 million or 124.1%. Within the same time, per capita incomes grew by 106.7%.

TABLE 25

Personal Disposable Income & Per Capita Income For <u>Ontario: 1971 to 1977</u>						
Item	1971	1973	1976	1977	Change, 77-71	
					#	%
Index (1971=100)	100.0	130.7	201.8	224.1	124.1	124.1
P.D.I. (\$000)	24,567	32,104	49,581	55,062	30,495	124.1
Per Capita (\$000)*	3,189	4,059	6,000	6,591	3,402	106.7

Source: SC, Market Research Handbook, 1979 (S-3413-501)
Table 5.3

* Computed on population from 1971 & 1976 Census, and from Ontario Statistics for 1973 and 1977, p. 43, Table 2.1.

An analysis of income levels by type of area (Metropolitan vs non-metropolitan areas) reveals the following:

- Average family income is higher in metropolitan areas of the province than in non-metropolitan areas. This could suggest that in instances where, for an example, there are increased costs of mobility, metropolitan area residents could afford such increased transportation costs without significantly shifting their expenditure patterns. In short they are better able to maintain their present lifestyles with minimal sacrifices.
- The gap between family income levels of metropolitan residents and non-metropolitan residents has been widening over the years. (Table 26)
- Increases in income levels in Canada as a whole have been larger than increases in Ontario. This phenomenon could be due in part to the decrease in the attractiveness of Ontario relative to other parts of the country---particularly Alberta and other Western provinces in recent years. Such a slight decline is also reflected in the low levels of net inter-provincial migration into Ontario.

TABLE 26
Comparison of Income Levels: Metropolitan and
Non Metropolitan Areas,
1974 to 1976

	AVERAGE FAMILY INCOME			74-75	75-76
	1974	1975	1976	% △	% △
CANADA:					
METROPOLITAN	14,833	16,613	19,000	12.0	14.4
NON-METROPOLITAN	16,029	17,832	20,560	11.3	15.3
	13,027	14,395	16,235	10.5	12.8
ONTARIO:					
METROPOLITAN	16,144	18,047	20,113	11.8	11.5
NON-METROPOLITAN	17,061	18,803	21,190	10.2	12.7
	13,944	15,859	17,048	13.8	7.5

Source: Statistics Canada, Market Research Handbook, 1979
Metropolitan = CMAs + CAs; Non-Metropolitan = All other
areas.

Given that overall income levels of Ontario families have increased in recent years and that such increases have been more pronounced in metropolitan areas of the province, the important question is how are these family incomes spent on goods and services? Are there shifts in preferences/choices/priorities, given the rate of inflation and growth in incomes? To answer these questions, one has to examine trends in family expenditures. For this, 1971 and 1976 family income expenditure patterns were compared and reviewed. These data are presented on Table 27.

TABLE 27

% Distribution of Average Dollar Expenditure By
Families in Ontario: 1971 and 1976

<u>Item</u>	<u>1971</u>	<u>1976</u>	<u>% Change 1971/'76</u>
Food	16.9	16.0	-5.3
Shelter	16.0	15.6	-2.5
Household Operations	3.7	2.4	-35.1
Furnishings & Equipment	4.4	3.9	-11.4
Clothing	7.4	7.0	-5.4
Personal Care	1.9	1.4	-26.3
Medical & Health Care	2.4	1.4	-41.7
Smoking & Alcohol	3.9	3.3	-15.4
Travel & Transportation	12.6	12.2	-3.2
Recreation	3.7	3.8	+2.7
Reading	0.6	0.6	0.0
Education	0.9	0.7	-22.2
Miscellaneous	1.9	2.2	+15.8
Total Consumption	76.3	73.2	-4.1
Personal Taxes	16.5	18.7	+13.3
Security	4.9	5.1	+4.1
Gifts & Contributions	2.4	3.0	+25.0
Total Expenditure	100.0	100.0	

Source: Statistics Canada, Family Expenditure in Canada 1971 & 1976
93-746 and 8-3301 Sept. 1978 Selected Tables

Though the above Table is self-explanatory and a lot of interpretation could be made by reviewing the statistics, in brief, the following observations can be drawn from the data presented:

- Based on total consumption, Ontario families are spending proportionally less on almost every item except recreation. This could be explained in part by the fact that family incomes have increased significantly (above inflation rate) since 1971. Family incomes are also a lot larger now because there are more wives and mothers working---thus two wage-earners per family.
- The increased proportional expenditure on recreation activities reflects an affluence supported by fewer numbers of families overall with dependent children. This is the 'me' generation.
- We are paying a lot more taxes. Approximately 18.7% of total family income in 1976 was spent on taxes--a 13.3% increase from 1971.
- The fact that expenditure on personal security is increasing could also suggest a gradual shift in our value systems.

The overall observation is that despite the significant shifts in expenditure patterns, families now have a lot more money and are probably saving more than ever before. The implications of this growing family income and less proportional expenditure on travel and transportation can be summarized as follows: given the level of family incomes/savings, individuals and families will choose and use those modes (depending on trip purpose, time of day and distance to be travelled) that meet their lifestyles and satisfy their priorities in terms of convenience, speed, comfort, flexibility in routing, and safety. 'Cost' may not rank high on this preference scale. Such a preference scale could have adverse consequences on the rail mode.

Time

Statistics on time allocation by households and individuals are very sketchy and almost non-existent. However, a review of the data produced by Ontario Recreation Survey (Exhibit 23) indicates that in 1973/74 Ontario adult residents had a total free time of 5 hours per day. The remainder, 19 hours, were spent sleeping, working, eating, etc. Indications in this 1979 report ^(*) (by the Ontario Ministry of Culture and Recreation), though unsubstantiated by data, is that there are gradual shifts in time allocation by individuals. Since 1974, the population in general is having a lot more free time to pursue choice activities such as recreation and leisure.

The above statement is partially substantiated by a study by Woods Gordon. ^(**) The study indicates that since 1950 the average hours of the work week has been declining. In 1978 the average hours per work week was observed to be 35.5 and based on these trends estimates are that in the next five years average hours per work week will decrease by approximately 3.4% to 34.3 by 1985. If this trend continues, the 4-day work week is right around the corner. So too are increasingly innovative work habits like job sharing and flexible work hours.

The implications of all this is that families and individuals will have more free time in the future to pursue activities other than work. If these activities involve travelling, they could have significant transportation implications.

Implications For Rail

With disposable income increasing, more time for travel, and people spending more on recreation, cost may be less of a priority consideration in terms of type of recreational activity selected and in terms of modal choice. Therefore, rail--perceived of as being relatively inexpensive but not necessarily satisfying other comfort, convenience or status needs--may suffer. Thus while the shorter work

(*) Ontario Recreation Survey, Vol. 1, Geographic Dimensions, Tourism and Outdoor Recreation Planning Study Committee, 1977.

(**) Woods, Gordon & Co., Tomorrow's Customers Today, 1979.

EXHIBIT 23

AVERAGE FREE TIME, LEISURE TIME, RECREATION TIME
ONTARIO RESIDENTS, 1973 - 74

TOTAL TIME PER PERSON PER DAY = 24 HOURS / 1440 MINUTES

FREE TIME = 5 HOURS / 301 MINUTES

LEISURE TIME = 4 1/2 HOURS / 268 MINUTES

RECREATION TIME = 1/2 HOUR / 33 MINUTES

REMAINDER 19 HOURS / 1139 MINUTES
SLEEP, WORK, EAT, PERSONAL HYGIENE, ETC.

Source: Ontario Recreation Survey, Vol. 1, Geographic Dimensions, Tourism & Outdoor Recreation Planning Study Committee, 1977. Also see MTC/URTPO, Future Recreation Scenarios For Ontario, Draft Report, March 1979 (Exhibit 1)

week and innovative work patterns like job sharing may promote more overall travel and transportation, rail policy will have to address those needs of the public aside from cost that influence travel propensity and mode choice.

ENERGY CONSERVATION AND CONSUMPTION

This section utilizes the 1977/78 urban concerns survey, conducted by York University-Institute for Behavioural Research for C.M.H.C., to explore people's attitudes, perceptions and behaviour towards energy use and conservation. The energy issue is reviewed here only as it relates to lifestyles. A more detailed analysis of energy as it relates to the rail mode is a separate task: one of the 24 major tasks to be performed for the task force.

The findings and observations from the analysis of the above survey are summarized below:

Perception of an Energy Problem

- The most significant observation was that a majority of Canadians and Ontario residents (51.5% and 52.9% respectively) do not perceive an energy problem now or in the immediate future. Note that the term is only "problem", not even "crisis".
- Of the Ontario residents who perceived an energy problem, (47.1%), they tended to be younger and better educated.
- Across Canada, differences in geographical location appeared to be closely correlated with availability of petroleum energy sources: 66.2% of Maritimers said yes, we have an energy problem compared with 39.7% in the Prairies.
- Within Ontario municipalities responses were generally uniform with the exception of Ottawa. This could be due to the fact that Ottawa's data includes Hull.
- In terms of income levels, the poor and the very rich perceived the energy problem in the same way: we have no problem now or in the immediate future.
- Ontario males (58.3%) perceived no energy problem while 53.2% of the females felt that Canada/Ontario has an energy problem.

Reasons for the Energy Problem

- Those who believed that an energy problem exists in Ontario tended to specify the following as the major causes:
 - (i) too much waste (42.5%)
 - (ii) not enough conservation (38.8%)
 - (iii) prices too high (34.4%), and
 - (iv) shortage of supply (32.9%)
- A detailed analysis of the responses showed that those with lower education (52.6%) picked price as the major culprit, followed by waste and shortage of supply.
- The lower income groups identified higher prices as being the major cause of the problem.
- Overall, the need to conserve and the need to reduce prices were identified as an overall concern.

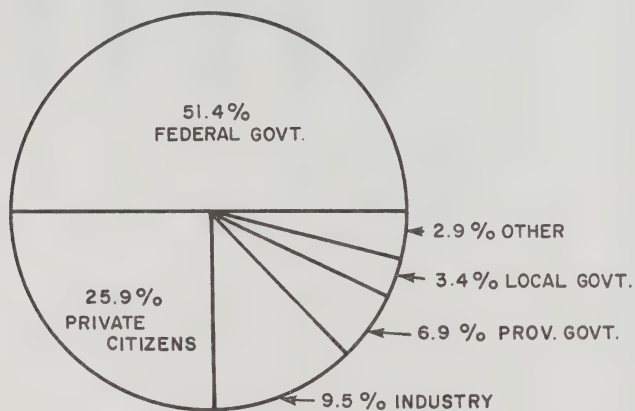
Responsibility for Finding Solutions

- Exhibit 24 summarizes the results of the analysis of this question.
- When asked who had the major responsibility for finding solutions to the energy problems, respondents overwhelmingly selected the Federal government (51.4%) followed by individual citizens (25.9%) and industry (9.5%).
- The results were the same for both sexes, all income groups, all educational groups and by all geographical areas.

Preference/Attitudes Towards Government Action to Solve the Energy Problem

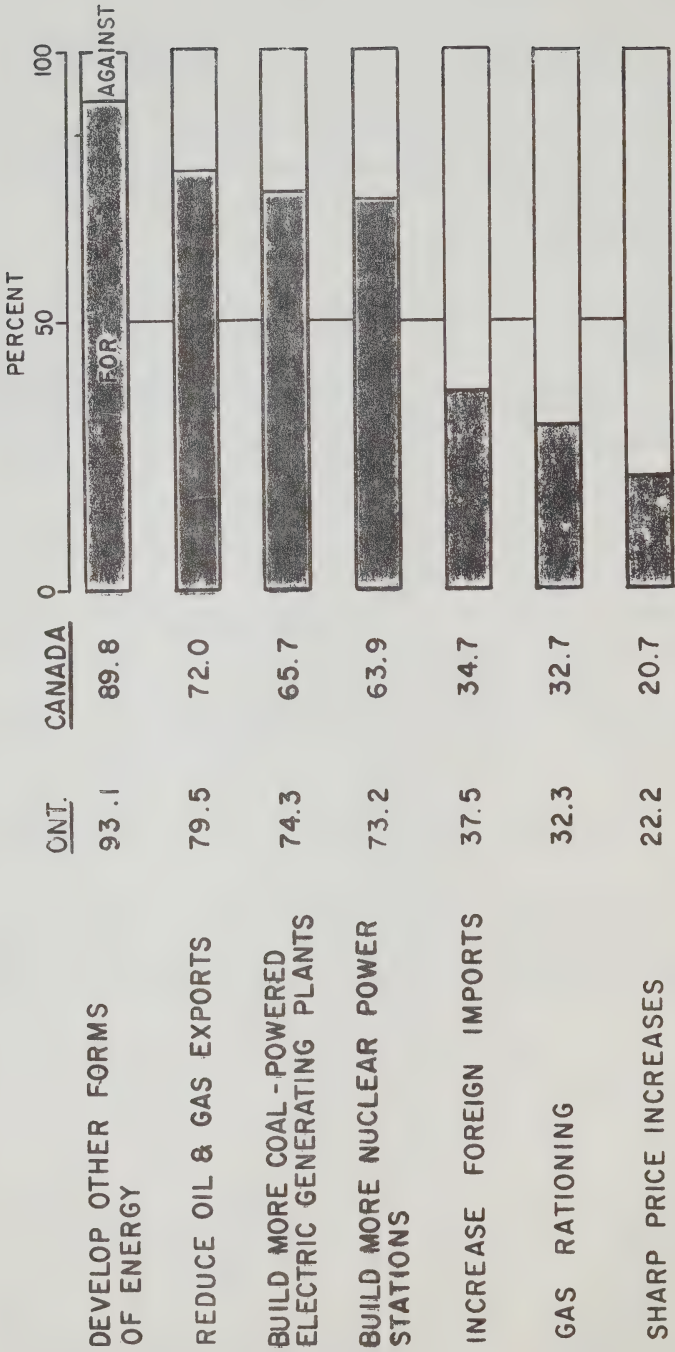
- Exhibit 25 summarizes the preference scale of Ontario residents, while Exhibit 26 summarizes the preference scale of United States residents.

EXHIBIT 24

**FINDING SOLUTIONS TO ENERGY PROBLEM:
ASSIGNMENT OF RESPONSIBILITY BY ONTARIO RESIDENTS**

SOURCE: MTC / URTPO, CMHC, YORK - IBR, URBAN CONCERNS SURVEY, 1977/78.

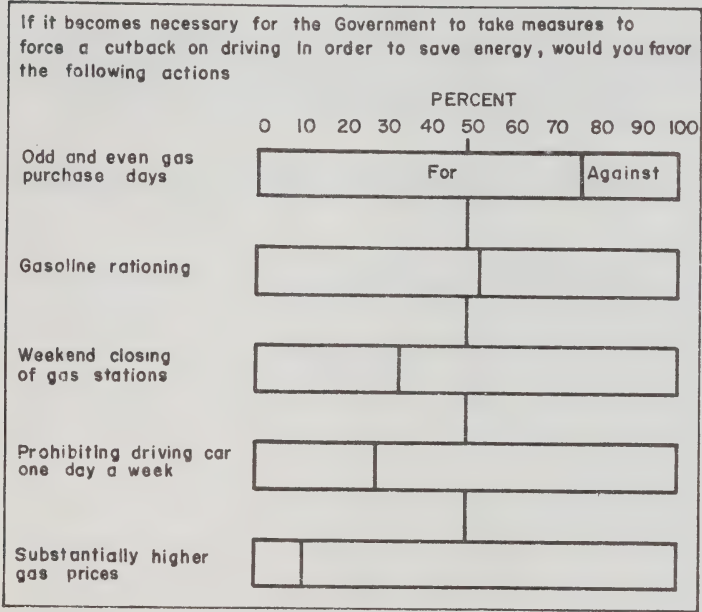
PREFERENCE FOR GOVERNMENT ACTION TO SOLVE ENERGY PROBLEMS
IN ONTARIO & CANADA



SOURCE: CMHC, YORK - IBR, URBAN CONCERNS SURVEY, 1977 / 78

EXHIBIT 26

PREFERENCE FOR GOVERNMENT ACTION TO SOLVE TRANSPORTATION ENERGY PROBLEMS IN THE UNITED STATES



SOURCE: CONFERENCE BOARD SURVEY (VOL. XVII NO. 2. FEB. 1980)

- Majority of Ontario residents indicated that rationing, sharp price increases, and increased foreign imports were UNDESIRABLE. This same attitude was uniform across Canada.
- Majority of Ontario residents responded favourably towards the construction of coal-powered generating plants, reducing oil and gas exports, building nuclear power plants and investing in new forms of energy sources.
- The responses were the same for both sexes, and all income groups.
- However, United States residents preferred odd/even-day gas purchasing and gasoline rationing as a means for combating their energy problems.

Steps taken by Ontario residents to reduce/conserve energy consumption

- The most commonly reported action was turning off lights (Exhibit 27).
- The two least actions taken to conserve energy were driving less to work and driving less for other trip purposes (Exhibit 27).

Major Conclusion & Transportation Implications

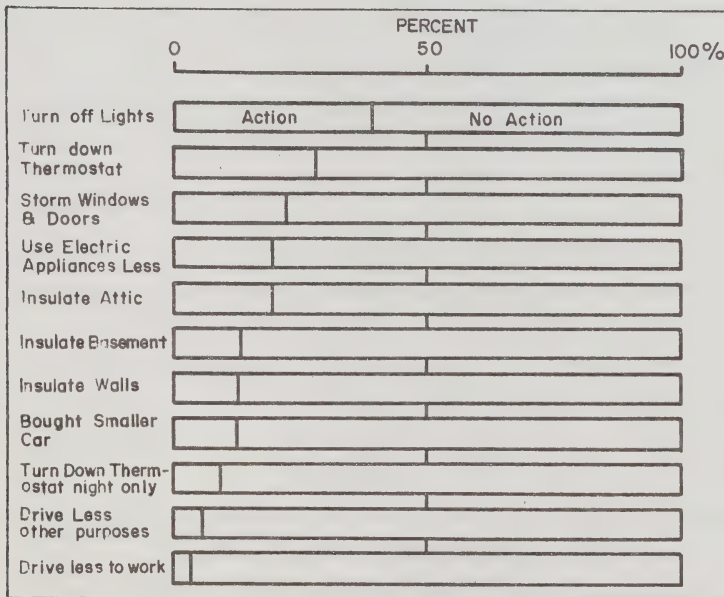
While this type of information can only take us so far, it is clear from the results that the most acceptable and therefore the most common actions taken by Ontario residents to reduce or conserve energy consumption are only those actions THAT WILL HAVE VERY LITTLE NEGATIVE IMPACTS ON THEIR LIFESTYLES.

These attitudes, perceptions and behaviour could have serious transportation implications. The transportation implications would be more relevant to the auto and transit modes than to rail and air.

Evidence of transition from walking to horse and buggy, to canal, to regional and transcontinental railroad, to streetcar rail, to automobile, and to air is part of our transportation history. Petroleum energy availability and cost will influence this progression

in the future. Public attitudes and behaviour will have to change dramatically to reflect even a modest change in individual travel behaviour patterns. Experience in the United States, Europe and the U.S.S.R. is that increases to date in fuel costs have had limited and largely selective and transitory impacts on selection of modes other than the automobile.

EXHIBIT 27
STEPS TAKEN BY ONTARIO RESIDENTS TO REDUCE
ENERGY CONSUMPTION: % WHO TOOK STEP



SOURCE: MTC/URTPQ, CMHC, YORK IBR, URBAN CONCERNS SURVEY. 1977/78

IV. LIFESTYLE PATTERNS PREFERENCES AND TRANSPORTATION CHOICES

Introduction:

The decision to travel and the choice of a transportation mode for a particular trip arises mainly from habit or past behaviour. A conscious decision weighing all alternatives usually is not made each time a trip is taken. Travel patterns and behaviour vary depending upon the users' socio-economic characteristics, the users' preferences and attitudes towards various modes as well as the purpose of the trip being taken, the distance or duration of the total trip, and the modes available for taking that trip.

The overall lifestyle pattern of the user and the transportation services provided affect the users' travel behaviour and mode choice. Changes in lifestyles, in travel behaviour and the reasons underlying user's preferences and choices help shape decisions made with respect to travel.

As Table 28 reveals, the largest component of person trips taken in Canada in 1977 are trips made by automobile. The public modes -- air, rail and bus -- accounted for about 11% of all person trips in Canada. Rail accounted for less than one per cent of the total 27.8 million trips taken.

TABLE 28

PERSON TRIPS MODAL SPLIT IN CANADA, 1977				
AUTO	AIR	BUS	RAIL	OTHERS
86.5%	5.8%	4.1%	0.8%	2.8%

Source: Report on June 1977 Travel Survey, Transport Canada

Different market sectors and regions of the country experience different modal share compositions. In Southern Ontario for example, there is proportionately more reliance upon rail, for intercity travel between Toronto - Montreal, Toronto - London, and Toronto - Windsor than there is between Toronto and the other city pairs surveyed (Exhibit 28). This suggests that rail travel is most pronounced along the populous Montreal - Toronto - Windsor axis. In all cases, the auto mode predominated as the principal mode choice for inter-city travel.

Table 29 contains similar information about person trips by mode between city pairs. It is derived from different sample sizes, sources, and study data, however. The information here suggests four interesting conclusions:

- . rail travel from city A to B as a proportion of total trips is often very different from reverse direction rail travel from city B to A
- . the air mode competes strongly with the auto for inter-provincial inter-city person trips
- . among the city pairs studied, rail travel is higher, in absolute and percentage terms, within the Montreal - Toronto - Windsor axis.
- . there are significant variations in modal choices for trip making between city pairs

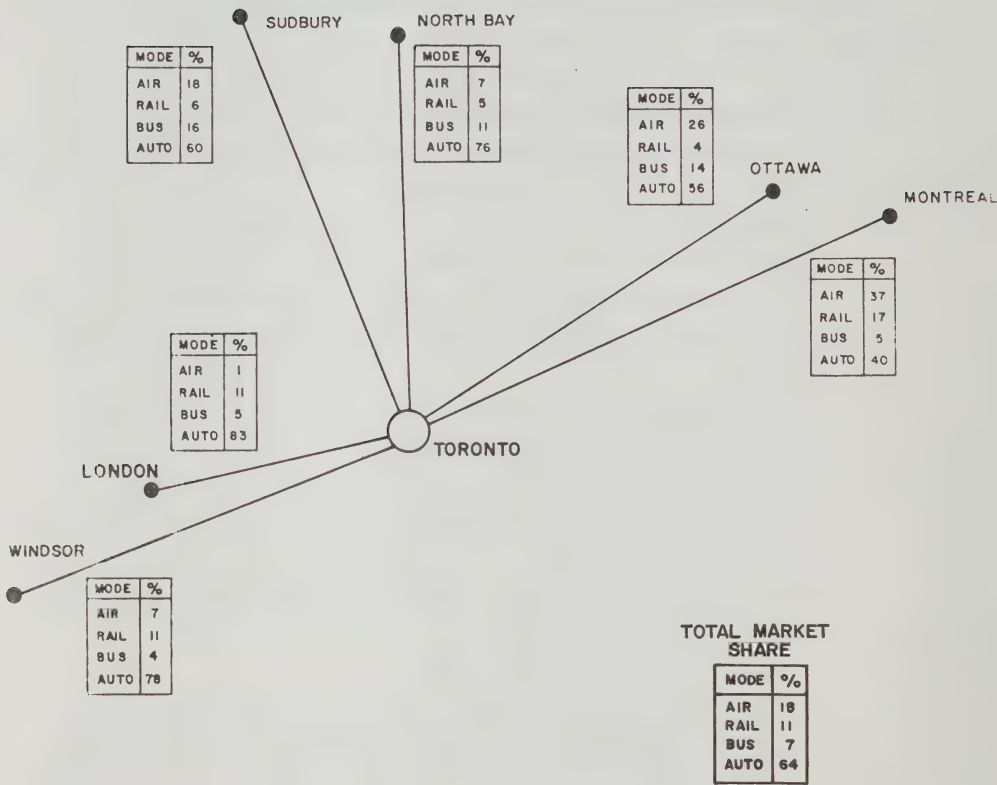
These variations in modal choice and travel propensity reflect variations in distance, reason for making the trip, the social and economic ability of the user to make the trip, and the user's perception of the services provided by the mode to meet the needs of the trips being made.

MODE CHOICE BY PURPOSE

The purpose of a trip is a main factor in determining which mode of travel is used. The nature of a trip varies in terms of the time available to take the trip, the necessity of taking the trip, the number of people having a similar desire to travel, and transportation needs at the destination, among other variables.

EXHIBIT 28

MODAL SHARE OF INTERCITY TRAVEL
FOR 6 CITY PAIRS
1976



SOURCE: SOUTHERN ONTARIO MULTIMODAL PASSENGER
STUDIES TRANSPORT CANADA, MTC, 1979

TABLE 29

Modes Used Between Toronto and Other CitiesPerson-Trips by Mode

	<u>Toronto to Sudbury</u>	<u>Sudbury to Toronto</u>	<u>Toronto to Windsor</u>	<u>Windsor to Toronto</u>	<u>Toronto to Montreal</u>	<u>Montreal to Toronto</u>	<u>Toronto to Thunder Bay</u>	<u>Thunder Bay to Toronto</u>	<u>Toronto to Winnipeg</u>	<u>Winnipeg to Toronto</u>
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Auto	74.9	32.5	95.5	37.5	55.7	45.4	41.7	-	18.8	2.2
Bus	9.3	52.3	-	-	3.8	2.1	-	-	-	2.1
Rail	-	5.1	2.4	20.1	8.4	5.9	-	-	4.7	4.4
Air	15.8	10.1	-	42.4	30.7	45.2	58.3	100.0	76.5	89.2
Other	-	-	2.1	-	1.4	1.4	-	-	-	2.1

Source: Appendix Report, to June 1977 Travel Survey, Transport Canada

Most trips can be categorized into broad trip purposes namely: business, visiting friends and relatives, other pleasure such as recreation, sports, and sightseeing as well as trips for personal reasons such as for medical attention.

Business trips in Canada account for about one-quarter of all intercity trips (Exhibit 29). The greatest proportion (about one third), of intercity trips greater than 100 miles are made for the purpose of visiting friends and relatives. Table 30 and Exhibit 29 both suggest that some 55 to 60 percent of total trips made are for pleasure -- that is for visiting, sightseeing, recreation and sports -- purposes.

TABLE 30

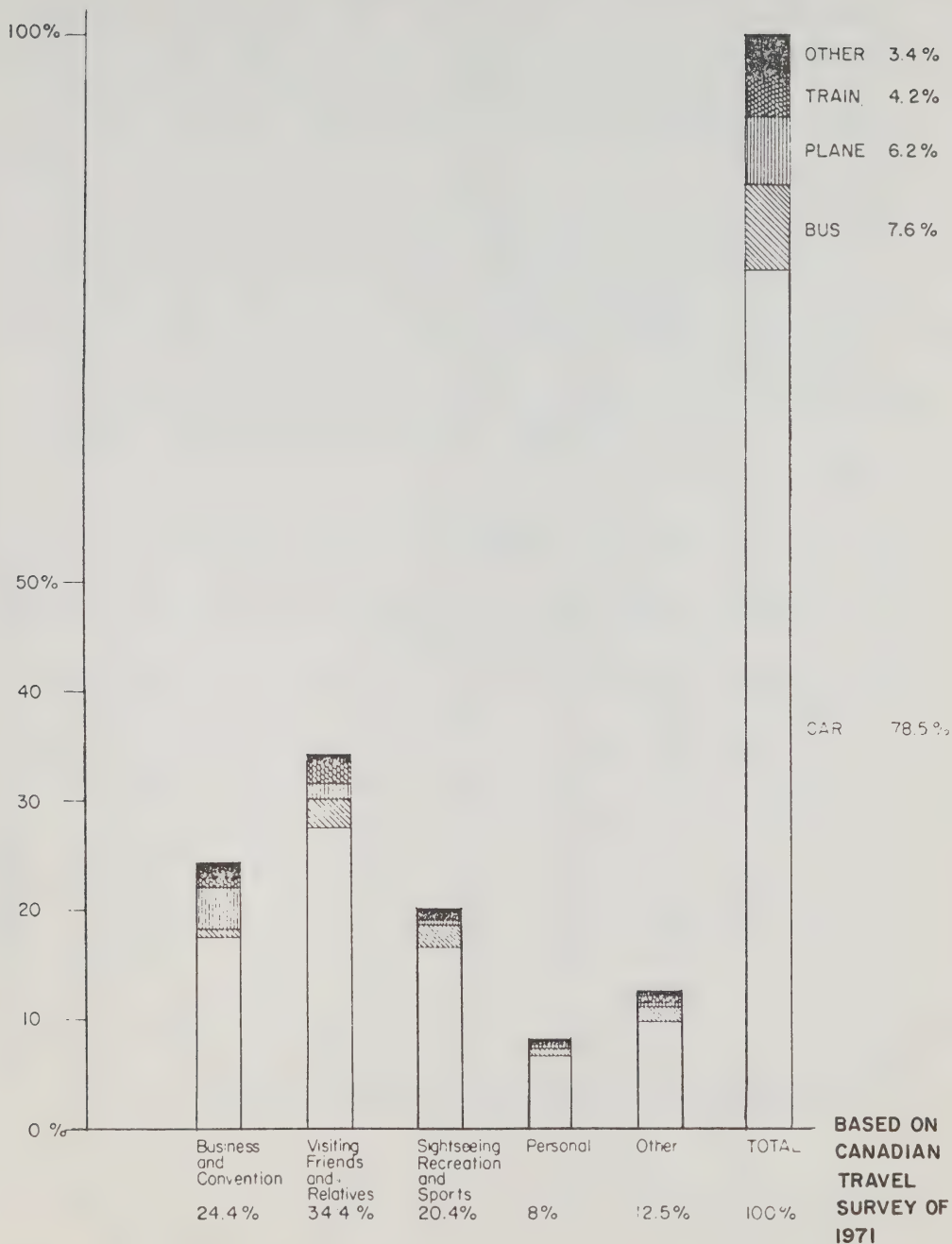
Person-Trips: Mode and Purpose, Canada

Purpose of Travel	Distribution of Purposes Shown in Person-Trips by the Mode					Total All Modes
	Car	Bus	Rail	Air	Other	
Business	18.4	13.1	20.8	51.7	33.2	20.5
Visiting	27.9	21.7	38.0	12.1	18.8	26.6
Other Pleasure	32.9	39.6	22.5	21.1	30.2	32.2
Personal Reasons	9.1	14.7	7.2	5.3	7.5	9.1
Other	11.7	10.9	11.5	9.8	10.3	11.5
Total Total Person Trips	100.0	100.0	100.0	100.0	100.0	100.0
(million)	24.0	1.1	0.3	1.6	0.8	27.8

Source: Report on June 1977 Travel Survey, Transport Canada

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EXHIBIT 29



DISTRIBUTION BY TRIP PURPOSE BY MODE

SOURCE: An Interim Report on Inter - City Passenger Movement in Canada,
Transport Canada, June 1975

As would be expected, Table 30 demonstrates that business is the predominant trip purpose in air travel, accounting for 51.7 percent of air person trips. The air mode is used to a lesser degree for visiting and other pleasure purposes (33.2 percent of air person trips) as compared with the other modes.

By comparison, trips for the purpose of business account for about one fifth of all rail person trips. Rail person trips for personal reasons are small, (7.2 percent) when compared with the bus mode (14.7 percent). However, a full 60.5 per cent of all rail person trips taken in Canada are for visiting and other pleasure purposes.

The breakdown and distribution of intercity trips taken within Ontario is illustrated in Table 31 and is generally similar to that found across Canada.

TABLE 31

Household Trips: Origin and Destination in Ontario by Mode and Purpose					
Purpose of Trip	Auto	Bus	Rail	Air	Total All Modes
Business	23.6	10.2	23.0	83.1	25.1
Visiting	25.9	25.3	42.1	6.0	25.1
Other Pleasure	32.0	40.0	21.0	5.0	31.6
Personal Reasons	9.2	14.0	8.3	4.8	9.1
Other	9.3	10.5	5.6	1.1	9.1
Total	100.0	100.0	100.0	100.0	100.0

Source: Appendix to Report on June 1977 Travel Study,
Transport Canada

Travel within Ontario shows a comparatively greater proportion of air travel for business purposes (83.1 percent of air trips) and a smaller proportion for pleasure (11 percent of air trips). The breakdown of rail trips indicates a slightly higher proportion in Ontario for the purpose of visiting (42 percent) and for business (23 percent) as compared with Canada (38 and 20 percent, respectively). Almost two-thirds (63.1 per cent) of all rail trips taken in Ontario are for visiting and other pleasure trip purposes.

It is evident from Tables 28, 30 and 32, that the automobile is the predominant mode of travel for all trip purposes. About three-quarters of business trips and about 90 percent of trips for all other purposes are made by auto (Table 32).

Trips by rail represent 1.2 percent of trips made for visiting and only 0.8 percent of business trips in Canada. Passenger rail is not pre-eminent among the public modes in any category of purpose: air dominates for business and other pleasure purposes; the bus mode predominates (among public modes) for personal and visiting trip purposes. In short, rail is often a distant second or third choice of mode for various trip purposes in Canada.

TABLE 32

Person-Trips: Purpose and Modal Choice, Canada

Purpose of Travel	Distribution of Modes Shown in Person-Trips for the Purpose					Total All Modes
	Car	Bus	Rail	Air	Other	
Business	77.4	2.6	0.8	14.6	4.6	100.0
Visiting	90.9	3.3	1.2	2.6	2.0	100.0
Other Pleasure	88.0	5.0	0.6	3.8	2.6	100.0
Personal Reasons	87.0	6.6	0.7	3.4	2.3	100.0
Other	87.8	3.9	0.8	5.0	2.5	100.0

Source: Report on June 1977 Travel Survey, Transport Canada

Impact on Rail Transportation

Rail is often the second, third or fourth potential choice of mode for a given trip purpose, depending upon the city or corridor under study. No single trip purpose offers extensive potential for modal shift to rail, as the following discussion suggests:

(a) Business Travel

Declines in economic growth rates; consolidation and integration of business operations; and a changing spatial organization of markets (international rather than local) as well as a slowdown of employment in certain sectors do not support a major expansion of growth rates of business travel. Nor do they suggest significant shifts from the auto and air modes as the mainstay of business communications, except perhaps in the direction of telecommunications substitution for business travel.

Rail infrastructure often is not located so as to readily service either new suburban industrial areas or concentrations of office/retail jobs in metropolitan regions. Where a number of enterprises are concentrated within a rail corridor, the proportion of rail person trips for business purposes increases. The inconvenience of changing modes if the destination is not directly serviced by rail, and the speed of the rail mode often deter the business traveller from using rail. What limited additional rail market potential for business travellers exists will depend upon the level of service provided and the travel time taken for business appointments.

(b) Pleasure Travel

Persons travelling for pleasure generally are not as concerned with time and tend to enjoy a more relaxing and less costly trip than business travellers. The higher utilization of

rail service between Toronto-Montreal, Toronto-Windsor and Toronto-London may reflect the existence of more infrastructure and transportation choices in this corridor as well as higher levels of service to satisfy travellers' requirements for sightseeing, visiting, recreation and sports trip purposes.

Specialty transcontinental (or long-distance excursion packages) travel, visiting relatives (due in part to high levels of residential relocation among a mobile population); and travel to regional tourism/recreational attractions seemingly are the only three areas of potential rail market growth for pleasure travel. Various factors acting as constraints for all three opportunity categories were discussed in Chapter III. Moreover, none of the three categories assures market growth by rail as distinct from the air, bus or other competing modes.

At best, increased leisure time and continued interprovincial migration could indicate a numerically modest potential increase in rail usage for pleasure trips and trips of longer duration and/or distance. However, with less public emphasis on the cost of transportation and more upon service, rail will have difficulties catering to pleasure travel among two and three wage-earning families with higher disposable incomes.

(c) Medical Travel (Access to Medical Care)

Access to medical service, particularly emergency care, often takes place by air, auto, or ambulance. Rail seemingly has little potential to increase its limited share of the market for this trip purpose.

(d) Shopping and Personal Business

Day-to-day or weekly shopping is predominantly a metropolitan or urban activity, rather than an inter-city activity. Rail has little role to play in satisfying such a passenger trip purpose, today or in the near future.

(e) All Trip Purposes

Rail travel today is concentrated in certain major corridors linking large metropolitan regions. Any policy designed to improve rail ridership should be based upon a thorough analysis of why rail travel for all trip purposes takes place in specific corridors between certain larger size centres. Analysis of service levels, integration of infrastructure, market density, and other attributes of the corridor should help identify the travel-influencing attributes worth offering or upgrading in these and other corridors.

MODE CHOICE BY SOCIO-ECONOMIC GROUPS

The socio-economic background of travellers influences their overall travel behaviour. The basic socio-economic characteristics examined here are age and sex, educational background, employment status and income levels.

Age and Sex

The distribution of the travelling population in Canada (38.6 percent of the total population) by age groups is similar to the distribution of the Ontario population. The age groups between 20 and 44 years of age have the highest proportion of travellers.*

About one-half of the person-trips in Canada are taken by travellers between 25 and 54 years of age (Table 33). This same age group accounts for 69 percent of air person-trips. Two thirds of the air travellers in this age group are male.

Of all bus person trips, 11.6 percent are made by persons 70 years of age and over. This age group represents only 5.1 percent of the total population.

The number of rail person trips peaks at 23.2 percent for the 25 to 34 age group. Children less than 14 years of age represent about 14 percent of rail person trips.

The male population makes up slightly more than one half of the total person trips and auto person trips. The female population comprises three fifths of the rail person trips and the bus person trips.

* Appendix to Report on June 1977 Travel Survey, Transport Canada, December 1978.

TABLE 33

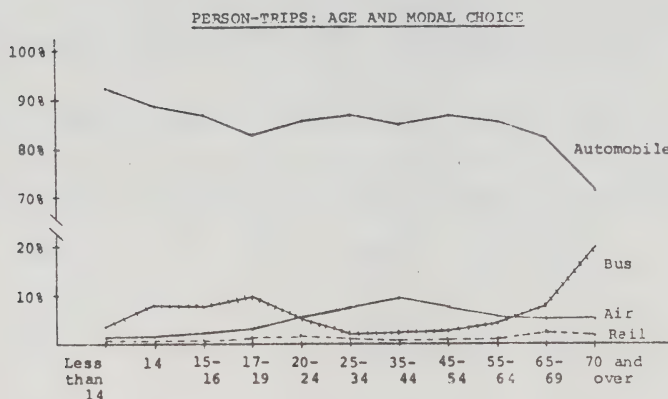
Person-Trips: Age, Sex and Modal Choice,
Distribution of Ages shown in Person-Trips by the Mode

	<u>Total</u>	<u>Auto</u>	<u>Bus</u>	<u>Rail</u>	<u>Air</u>	<u>Canada Population</u>
Total	100.0	100.0	100.0	100.0	100.0	100.0
Male	53.1	53.3	38.7	39.7	60.0	49.5
Female	46.9	46.7	61.3	60.3	40.0	50.5
Less than 14 years	18.3	19.6	15.7	14.4	5.4	24.0
Male	9.3	9.9	8.3	7.5	3.1	12.2
Female	9.0	9.7	7.4	6.9	2.3	11.8
14 years	1.4	1.4	2.7	0.7	0.4	2.0
Male	0.7	0.7	1.6	0.1	0.3	1.0
Female	0.7	0.7	1.1	0.6	0.1	1.0
15-16 years	2.5	2.5	4.7	2.5	1.0	4.4
Male	1.3	1.3	1.8	0.9	0.5	2.3
Female	1.2	1.2	2.9	1.6	0.5	2.1
17-18 years	4.2	4.0	10.2	6.2	2.3	5.9
Male	1.9	1.9	4.0	1.0	0.8	3.0
Female	2.3	2.1	6.2	5.2	1.5	2.9
20-24 years	10.4	10.3	13.1	13.1	9.9	8.8
Male	5.4	5.4	5.3	4.8	4.3	4.3
Female	5.0	4.9	7.8	8.3	5.6	4.5
25-34 years	21.6	21.6	11.5	23.2	27.5	16.1
Male	12.1	11.9	5.8	8.0	17.0	8.0
Female	9.5	9.7	5.7	15.2	10.5	8.1
35-44 years	15.0	14.7	8.4	10.4	24.1	11.5
Male	8.2	7.9	3.0	4.1	16.3	5.8
Female	6.8	6.8	5.4	6.3	7.8	5.7
45-54 years	13.8	13.8	9.3	13.0	17.2	10.9
Male	7.8	7.8	3.7	8.6	11.3	5.4
Female	6.0	6.0	5.6	4.4	5.9	5.5
55-64 years	8.1	7.9	8.3	7.1	8.0	8.3
Male	4.2	4.3	1.9	2.2	4.6	4.0
Female	3.9	3.6	6.4	4.9	3.4	4.3
65-69 years	2.3	2.2	4.5	5.2	2.0	3.0
Male	1.1	1.2	1.1	0.8	0.8	1.4
Female	1.2	1.0	3.4	4.4	1.2	1.6
70 years and over	2.4	2.0	11.6	4.2	2.2	5.1
Male	1.1	1.0	2.2	1.7	1.0	2.2
Female	1.3	1.0	9.4	2.5	1.2	2.9

Source: Appendix to Report on 1977 Travel Survey,
 Transport Canada

The automobile accounts for the highest percentage of all person trips for all age groups (Exhibit 30). In the over 70 years age group the number of auto person trips drops to about 71 percent. Within the same age group the number of person trips by bus peaks at 19.7 percent.

EXHIBIT 30



Source: Summary of Report on June 1977 Travel Survey,
Transport Canada.

The rail mode is the least used mode across all age groups. Its usage however increases in the 65 to 69 and over 70 years age groups to about 2 percent of trips within each age group. Seniors generally are more dependent upon the bus (rather than rail) mode.

Educational Level

Higher levels of formal education correspond with greater frequencies of travel. For example, university graduates represent about 5 percent of the total Canadian population but account for about 12 percent* of those taking 5 or more trips per year.

* Summary Report on 1977 Travel Survey, Transport Canada.

Those with more formal education are more likely to use rail (and other public transportation modes). The 0 to 8 years of schooling group represents 43.5 percent of the total population but accounts for only 31.3 percent of the total person trips taken (Table 34). Only 10.6 percent of air person trips are made by those in this education group.

TABLE 34

Person-Trips: Education and Modal Choice							
Education Level	Distribution of Education Levels shown in Person-Trips by the Mode					(Persons) Canada	
	Auto	Bus	Rail	Air	Other	Total	Population
Total Person-Trips	100.0	100.0	100.0	100.0	100.0	100.0	100.0
0-8 Years Schooling	32.7	39.1	26.0	10.6	22.5	31.3	43.5
Some (or completed) H/S, No post-secondary	37.9	34.9	35.0	37.0	48.7	38.0	37.9
H/S, some post Secondary	8.6	10.2	16.4	13.2	9.0	9.1	6.5
Post-secondary Certificate or Diploma	10.7	7.1	9.7	13.9	11.8	10.7	6.9
University	10.1	8.7	12.9	25.3	8.0	10.9	5.2

Source: Report on 1977 Travel Survey, Transport Canada

Although those travellers with high school and some post secondary education represent 6.5 percent of the Canadian population, they account for 16.4 percent of rail person trips. University graduates use each mode in proportions greater than their limited 5.2 percent composition of the total population.

Labour Force Status

Employed persons who represent about 42 percent of Canada's population comprise 56 percent of total person trips (Table 35). Those not in the labour force have less tendency to travel.

TABLE 35

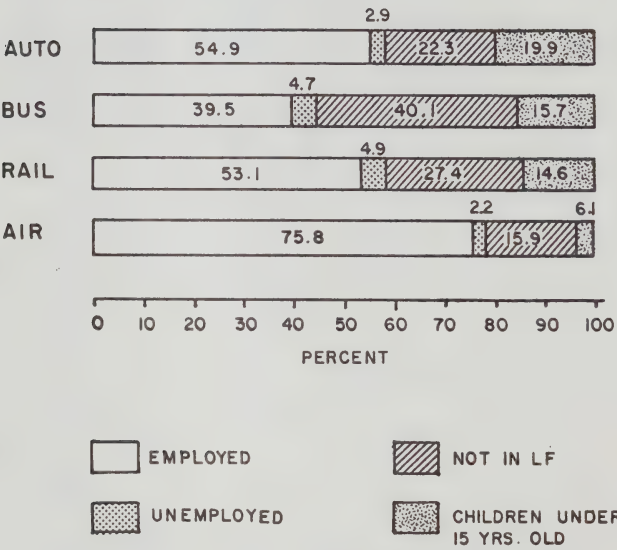
Labour Force Status and Person Trips		
Labour Force Status	Total Person-Trips	Proportion of Canada's Population
Total	100.0	100.0
Employed	55.9	41.9
Unemployed	2.9	3.7
Not in Labour Force	22.6	28.3
Children under 15	18.6	26.1

Source: Summary Report on 1977 Travel Survey, Transport Canada

The air mode is chosen by employed persons to a greater extent than the other modes (Exhibit 31). About 76 percent of air person trips are made by employed persons as compared with only 40 percent of bus person trips. Conversely those not in the labour force make up 40 percent of bus person trips but only 16 percent of air person trips. About 53 percent of rail person trips are made by employed persons. The strongest similarities in proportional mode choice by labour force status seem to occur for the auto and rail modes.

EXHIBIT 31

PERSON - TRIPS: LABOUR FORCE STATUS
AND MODAL CHOICE



SOURCE: SUMMARY OF REPORT ON JUNE 1977
TRAVEL SURVEY, TRANSPORT CANADA

Income

As Table 36 reveals, the greatest number of total trips taken are by those travellers in the highest income level. Both the rich (over \$25,000 income per year), the poor (under \$10,000) and all other income groups in between (\$10,000 - 24,999) travel by train. In comparison, the use of air and auto modes is more high income sensitive.

TABLE 36

Distribution of Trips by Mode and by Income Level						
Modes of Travel Used						
Annual family income	Total trips	trips by plane	by train over 200 mi	by bus over 200 mi	by car over 200 mi	none of these
Under \$10,000	556	95	42	72	215	132
10,000-14,999	480	86	25	47	214	108
15,000-19,999	599	120	40	79	283	77
20,000-24,999	405	95	25	24	211	50
25,000 or more	860	244	65	73	420	58
Total trips by Mode	2900	640	197	295	1343	425

Source: Public Opinion Survey, Modes of Travel, by Canadian Facts July 1979.

In summary, the automobile is the predominant mode of travel for all income levels. Almost 40 percent of trips by plane are made by those in the highest income level. The highest proportion of bus trips are made by travellers in the middle income levels. Rail travel is more uniformly spread over all income levels.

Impacts on Rail Transportation

Population trends and forecasts suggest a continuing median aging of the population. This should influence the type of transportation services required to meet society's needs. Present behaviour indicates a lower auto usage but higher rail and bus usage by the older age groups. These factors combined tend to indicate a potential for greater rail and bus services for the elderly.

It should be stressed, however, that Ontario will not have a decidedly aged demographic mix for at least two decades, if then. This means that the number of seniors (over 65 year olds who are more of a transit "captive ridership" group within the population) will not be sharply increased in proportional terms in the near term. Trends toward an aging population will not mean immediate or significant rail market growth potential for several years (based on this factor alone).

Because buses (rather than commuter rail service) offer more flexibility in routing and service for seniors sixty five years of age and over, transit rather than commuter rail may have more growth potential in this regard.

Increasing labour force participation rates by women indicate an increased demand for business auto and air services. The 'housewife' component of bus and rail travel will, at the same time, tend to decrease with the continuing shift into the labour force. More affluent, two income families could use more of their disposable income for other purposes including travel.

Rail plays a role in the movement of people and goods. Generally speaking, employed men of all income groups and most age levels are under-represented as a proportion of passenger rail travellers today. Any policy that focuses upon specific market segments of the population should address this potential target population if rail ridership is to be meaningfully increased. Recent patterns of rail usage do not suggest that rail is a mode restricted to the unemployed, the elderly or the poor.

MODE CHOICE BY DISTANCE TRAVELLED

Distance Factor

The distance travelled to a destination has a relationship to the mode chosen. Air travel, for example, predominates for long distance and overseas trips. Time and convenience are main concerns in long distance travel. Over relatively short distances, the rail and bus modes are a source of competition for air travellers.

The number of auto person trips represents about 90 percent of total person trips within Ontario (Table 37). Of the trips originating in Ontario with destinations outside the Province, only about two-thirds (63 percent) are made by auto. Air person trips account for about one-quarter of Ontario-origin person trips with destinations outside Ontario. Rail and bus travel also show an increased proportion of travel to destinations outside Ontario. Generally the public modes have higher representation in Ontario origin trips that end in destinations outside Ontario. The increase in the air proportion for trips to places outside Ontario indicates the predominance of air travel for longer distance travel.

TABLE 37

Person-Trips, Origin in Ontario, Destinations Within Ontario Versus Outside Ontario, by Mode Weighted Counts						
Destination	Total	Auto	Air	Bus	Rail	Others
Within Ontario	100.0	90.9	1.7	3.8	1.1	2.5
Outside Ontario	100.0	63.3	23.8	5.9	3.2	3.8

Source: Appendix to Report on 1977
Travel Survey Transport Canada

Duration (Length of Stay)

The duration or length of stay involved in a particular trip also has an influence on or at least a relationship to travel propensity and choice of mode. As Table 38A reveals, half of all trips involve none or one night away from home. Auto trips predominate all trip durations, comprising about 90 percent of all trips 2 days or less in length (Table 38b). The proportion of auto trips drops to about 45 percent for trips of between 17 and 30 days duration.

TABLE 38

Person-Trips: Mode by Number of Nights								
Percentage by		Nights Away from Home						
a) Number of Nights		Total	0	1	2	3-16	17-30	31+
Total		100.0	37.0	15.1	27.3	18.9	1.2	0.5
Auto		100.0	38.9	16.0	28.8	15.5	0.6	0.2
Bus		100.0	38.7	11.0	21.6	27.2	1.3	0.2
Rail		100.0	18.3	9.4	17.3	51.4	2.5	1.1
Air		100.0	11.4	9.6	12.5	53.2	9.4	3.9
Other		100.0	39.1	10.5	26.4	21.6	1.8	0.6
b) <u>Percentage by Mode</u>								
Total		100.0	100.0	100.0	100.0	100.0	100.0	100.0
Auto		86.6	90.6	90.9	90.9	72.1	44.6	42.0
Bus		4.0	4.2	2.9	3.2	5.9	4.3	2.3
Rail		0.8	0.4	0.5	0.5	2.3	1.8	2.0
Air		5.8	1.8	3.7	2.7	16.4	45.4	50.2
Other		2.8	3.0	2.0	2.7	3.3	3.9	3.5

Air person trips represent about 45 percent of trips between 17 and 30 days' duration. The proportion of air travel tends to increase with the length of trip durations.

The rail and air modes predominate for trips between 3 and 16 days in duration. This represents about 51 and 53 percent of rail and air person trips respectively (Table 38a). Only 19 percent of total person trips are of length from 3 to 16 days.

The greatest proportion (about 39 percent) of bus and auto person trips are same day return trips. Same day return trips represent about 37 percent of total person trips but only 18 percent of rail person trips.

In summary, the auto and air modes dominate long distance travel. The speed and convenience of air service for long distance travel cannot be provided by other modes. The ground transportation modes provide an opportunity to "see the country" along the way, should this be desirable to the traveller.

Shorter distance travel is more competitive between modes. The availability of alternate services allows the traveller to make a choice of mode based on factors such as total time, cost, convenience and other factors. This competition between modes, for example, is evident in the Windsor-Quebec corridor where rail and bus fares reflect competition for greater portions of the intercity market.

Impact on Rail Transportation

Based on past travel behaviour and current infrastructure, rail remains most competitive over short to medium travel distances. Rail appears to have few exclusive general attributes in terms of access, travel time or degree of personal comfort and convenience for short to medium distance travel.

REASONS FOR MODE CHOICE

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A traveller's mode choice can only partially be explained by his or her socio-economic characteristics. Reasons underlying mode choice vary with the different modes. These reasons must be taken into consideration when dealing with policies for the transportation system as a whole.

The general attributes of why people choose a particular mode are that the mode should be comfortable, enjoyable, safe, inexpensive, fast, clean, friendly, and dependable. The modes are chosen depending on the order of importance of these descriptors to the traveller and their individual extent of importance. Common reasons for choosing the train are that it is comfortable, enjoyable, safe, inexpensive and dependable. (*)

The reasons for choosing a particular mode also vary with the trip purpose. Business passengers are mainly concerned with time. They are interested in speed, regularity, frequency and reliability of service as well as with comfort and efficiency. Non-business travellers, on the other hand, generally consider price to be more important than speed and comfort. (**)

In half the cases, convenience is cited as the single factor why people say they travel by auto (Exhibit 32). In comparison, only about one-quarter of those who travel by rail cite convenience as the main reasons.

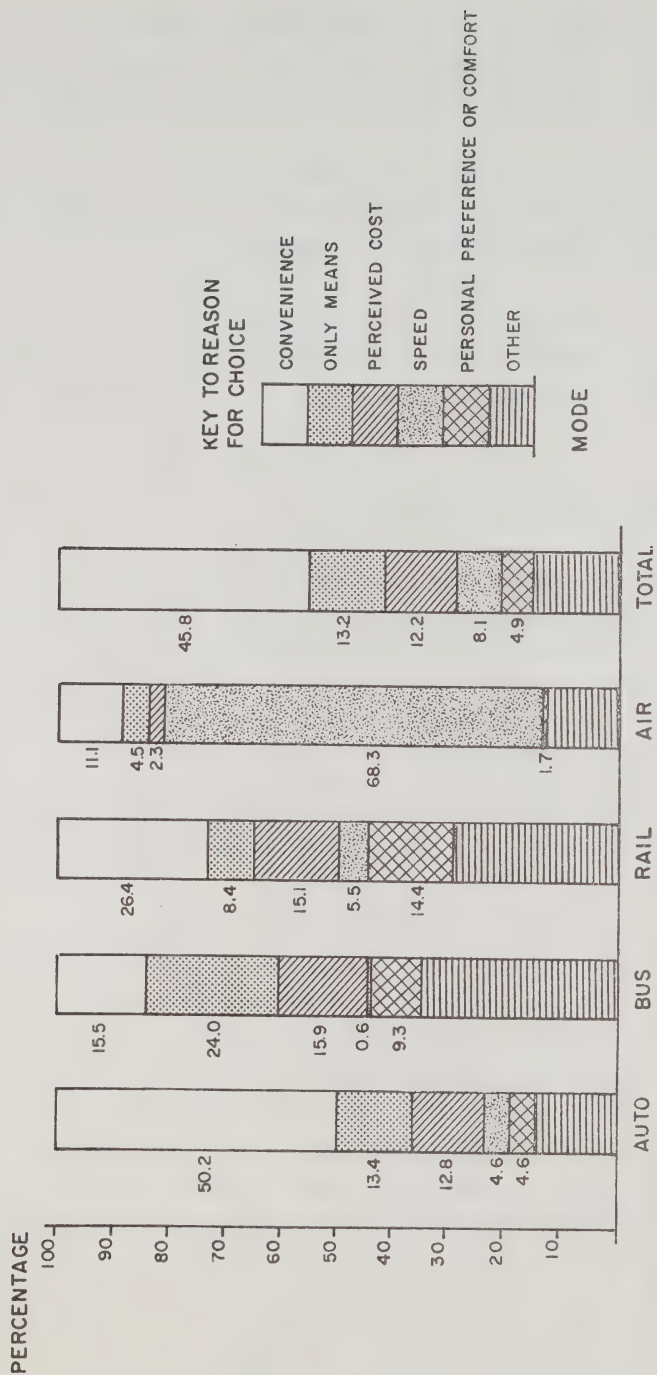
About one quarter of bus person trip travellers stated that the bus was the only means available to them. About 8 percent of rail person trips used rail for the same reasons. A number of different reasons for using the bus mode is indicated by the large percentage (about 35 percent) for "other" reasons.

The rail mode is chosen for reasons of personal preference or comfort more so than the other modes. This reason represents 14 percent of rail person trips responses as compared with 5 percent of total person trips.

(*) Public Opinion Survey Modes of Travel, by Canadian Facts, July 1979.

(**) An Interim Report on Inter City Passenger Movement in Canada, Transport Canada, June 1975.

PERSON - TRIPS: REASON FOR CHOICE OF MODE BY MODE



SOURCE: SUMMARY REPORT OF 1977 TRAVEL SURVEY, TRANSPORT CANADA, DEC. 1978

The air mode is chosen predominantly because of its speed (68 percent of air person trips). Only 2 percent chose it for "economic" reasons and only 2 percent for personal preference or comfort.

Both the rail and the bus modes are perceived to be cheaper than air. About 15 percent of person trips in each of these modes chose them for reasons of economics.

The reasons for mode choice expressed for trips in the Toronto-Ottawa-Montreal triangle are similar to those expressed about Canada in general (Table 39).

Impact on Rail Transportation

Why people say they do what they do may not be why they act as they do. Nevertheless, the reasons for mode choice give an indication of the factors that may be influential in realizing a desired mode shift. The large number of air travellers using the air mode for reasons of speed may, for example, be a market for high speed rail service, in certain situations. Thus, those factors that best indicate the reasons for mode choice for various travel groups may be used to provide a more efficient system.

Cost is not the principal stated prerequisite of those who currently travel by rail. Any policy designed to increase rail's share of total travel -- in addition to specific geographic (corridor and city pair) components and target client promotion elements -- also needs to address the efficiency, comfort and convenience of the service. Rail service often (92%) has no monopoly for a specific trip according to the public opinion surveys examined here. It must compete for more riders in most situations and that competition will not be decided by cost or at least by cost criteria alone.

TABLE 39

REASONS FOR MODE CHOICE RATING BY MODE AND TRIP PURPOSE
Toronto-Ottawa-Montreal Triangle

	Bus	<u>MONTREAL TO OTTAWA</u>			<u>TORONTO TO MONTREAL</u>		
		Air	Rail	Car	Air	Rail	Car
<u>BUSINESS</u>							
Convenience of schedule	1	1	1	2	2	2	2
Door to door travel time	2	2	3	1	1	4	
Confidence in arriving on time		3	2	3	4	3	
Safety	3	4	4		3	1	3
Minimum advance arrangements	4						
Convenience of auto at destination				4			1
Cost of trip							4
<u>PLEASURE</u>							
Convenience of schedule	1	1	2	3	2	3	4
Door to door travel time	2	2	3	2	1		
Confidence in arriving on time		3			4		
Safety	4	4	1	1	3	1	2
Total Cost	3		4	4		2	1
Sitting comfortably						4	
Convenience of auto at destination							3

Source: Survey of Intercity Travellers Ontario October 1974

PREFERENCES AND ATTITUDES TOWARDS EACH MODE

The preferences and attitudes towards each of the different modes of travel vary significantly with each individual traveller. Preferences and attitudes are most often expressed as qualitative descriptors rather than quantitative attributes of the travel modes.

The U.S. D.O.T. study in the Northeast Corridor in early 1970's examined mode choice decisions. In determining the value of travel time both "rational" and "non-rational attitudinal" value considerations were described. Some of these factors were as follows:

VALUE CONSIDERATIONS

Rational

- speed and time
- cost
- convenience
- physical comfort
- reliability of schedules
- safety from accidents
- using travel time usefully

Non-Rational Attitudinal

- "aggravation" factor
- waits and delays
- status and prestige
- sociability and privacy
- cleanliness
- food, drink and other auxiliaries
- service courtesy and feeling welcome
- freedom and flexibility
- modernity
- information, familiarity and knowledge-ability.

Source: The Needs and Desires of Travellers in the Northeast Corridor, Survey of the Dynamics of Mode Choice Decisions, DOT Washington, D.C. Jan. 1970.

Studies in the Quebec City-Windsor corridor in 1976 indicate many of the same attributes or considerations are given to mode choice by the Canadian travelling public. The most significant attributes for choosing a mode of transport were found to be

- on time reliability
- departure times
- total door to door travel time
- terminal convenience and
- transportation cost.

Some attributes that were found to be important in terms of keeping a person on the mode chosen are personal comfort, quality of ride, baggage arrangements, mobility during the trip, peace and quiet, food and beverage service, and reservations.

The various modes are viewed as providing service as described by these attributes to different degrees. An example of perceived attributes for the different modes as found in Eastern Ontario are described in Exhibit 33.

From this survey, rail service in the Toronto-London-Windsor corridor was viewed by consumers to be reliable and convenient. Reliability of rail arrival and departure was considered as reliable as air. Rail was rated the highest of the modes in terms of spaciousness (having room to stretch) and mobility on route. Rail ride quality was considered to be between that of air and bus. Consumers viewed rail as providing a place for obtaining both food and drink. In addition, the rail terminals along these routes were also considered as being convenient.

Implications For Rail Transportation

There is a need for more surveys of public attitudes and preferences between modes. There can be no effective government sponsored educational program about the advantages and opportunities of rail transportation unless we better understand what factors shape modal choice and travel or not decisions. Likewise, it is a mistake to encourage the provision, upgrading and maintenance of certain service attributes either in locations or of types irrelevant to public needs.

The number, kind, and range of service attributes appear to be significant in the choice of mode of travel in Ontario. By comparison, service quality will maintain customer allegiance by the traveller to that mode. Currently, the air mode (perceived of as being fast and expensive) and the auto mode (seen to be convenient and cheap) appear to cover the range of consumer travel demands. By comparison the bus is perceived of as being inexpensive and uncomfortable while the rail mode is seen to be spacious but slow. In order to obtain any significant shift to the

EXHIBIT 33
PERCEIVED ATTRIBUTES BY MODE IN EASTERN ONTARIO
-1976-

AUTO	AIR	BUS	RAIL
A D V A N T A G E S			
<ul style="list-style-type: none">• high level of mobility• personal convenience• perceived to be cheap• transportation at destination• good for group travel• facilitates non-work trips	<ul style="list-style-type: none">• fast• same day return trips• connections to TIA are convenient• some economic impact on community	<ul style="list-style-type: none">• inexpensive• schedules convenient• downtown to downtown service• perceived to have specialized clientele• adequate service	<ul style="list-style-type: none">• more relaxing than driving• spacious• adequate service• service benefits a greater cross-section of community• reduces dependance on auto
roads • perceived as social benefit			
• encourages all types of trips			
D I S A D V A N T A G E S			
<ul style="list-style-type: none">• strain of driving• some poor road conditions• sense of isolation for those with no car	<ul style="list-style-type: none">• expensive• lacks transportation at destination• high cost of access to airport• benefits only limited segment of population• not perceived to improve tourist industry• should not be subsidized	<ul style="list-style-type: none">• frequent stops• cramped space• not very comfortable• transportation required at destination	<ul style="list-style-type: none">• inconvenience of schedules• slow• comparatively expensive• lacked car at destination

From: Intercity Transportation - Public Attitudes and Perceived Social Impact Associated with Upgrading Intercity Transportation in Eastern Ontario, MTC, 1976

rail mode, today's public perceptions must be heavily transformed. There undoubtedly are limits to the promotional marketing of rail's general potential and/or service details without significant changes in the macro socio-economic factors that affect vehicle ownership, mode choice and travel frequency behaviours that in turn influence public perceptions of modes relative to one another.

V. SUMMARY OF TRENDS/FACTORS AND TRANSPORTATION CHOICES

In this Chapter, major observations from Chapters III and IV are summarized (trends in lifestyles, influencing factors, transportation preferences and choices) as they relate to transportation in general and rail travel in particular. Potential transportation implications of identified trends are highlighted. Finally, the impacts of relevant trends on the rail mode are discussed, in three specifics:

- A. increased competition from other modes
- B. more metropolitan region share for rail
- C. more intercity travel share for rail

The symbols used are ● highly; ◐ to a degree; ⊗ negative impact, in this multi-page summary:

TREND	TRANSPORTATION IMPLICATIONS	RAIL IMPACTS		
		A	B	C
o Continued growth in total employment; dominance of the service sector; dispersion of industrial firms to suburbs; and the concentration of service sector jobs in down-town areas and centres of urban places	o Growth in traffic volumes; lengthier cross commuting for the work trip partly because of local imbalances between job types and labour force skills	●	●	
o Continued increase in female participation in the work force; growth in the number of working mothers and wives;	o Growth in driver population, auto ownership; trip-making per capita; and congestion particularly during the work trip peak period	●		
o Steady decline in the number of hours per average work week, possibly culminating in a 4-day work week; more innovative work habits, job sharing	o More free time leading to more recreational travel opportunities. But flexi-day offs could offset or even out auto recreational trip peaks on recreational routes	●		
o Even longer distance summer weekend travel to remote cottage and resort destinations	o Low density, scattered development with little chance of service by rail	●		⊗
o Increased shorter duration, closer-to-home mini - vacations; as well as increased foreign destination travel especially in winter	o More recreational travel by families in major metropolitan regions; continuing reliance upon air and auto modes primarily	●	●	⊗

TREND	TRANSPORTATION IMPLICATIONS			RAIL IMPACTS		
				A	B	C
o Continued central city depopulation in major urban centres coupled with growth in central city employment in the service, financial and trade sectors	o Increase in cross-commuting and peak hour congestion on highways or urban transit, particularly for the work trips			●	◐	
o Growth in personal disposable income, average time for travel; and availability of consumer credit	o Increase in auto ownership, and for the choice of mode, cost may not be a major factor; increased competition from auto, air			●	⊗	⊗
o Stable or declining cost of mobility in relation to growth in family incomes	o More funds available to spend on transportation; cost may not be a significant factor in mode choice decisions except for the poor, the young, the elderly and the disabled			●	◐	◐
o Growth in auto ownership, particularly the more fuel inefficient 8 cylinder cars	o Continued dominance of auto for short trips and for all trip purposes; increased consumption of gasoline			●	⊗	⊗
o Reluctance to conserve transportation energy (trends show growth in miles travelled and growth in gasoline consumption); no change in prevailing lifestyles even with current increases in the cost of gasoline	o It becomes difficult to persuade the public to conserve transportation energy; status-quo transportation behaviour				⊗	⊗

TREND	TRANSPORTATION IMPLICATIONS	RAIL IMPACTS		
		A	B	C
o Driving is essential for three of top five leisure time activities	o Continuing dependence upon auto	●	⊗	⊗
o Preference for comfort, convenience and service criteria (above cost)	o Continued reliance on air and auto modes	●	⊗	⊗
o Increased median aging of population	o Increase in number of mobile - aged population (30-45 years) in short range; not well rail/transit "captive" market for at least two decades	●		
o Trends towards shorter work week	o Significant financial impact on commuter rail services	●	⊗	
o Increased participation of a more educated and older average population in active travel-related recreation activities	o Opportunity for urban transit for trips to events; the difficulty of serving cottage/camping trips except by auto mode	●	⊗	⊗
o Prevailing value system centred around the basic fundamentals of "freedom of choice"; few psychological benefits attached to rail mode	o Modes such as rail and transit may not be frequently used except with major shifts in values, lifestyle behaviour	●	⊗	⊗
o Slower population growth rates; shrinking average family size, and growth in household formation	o Potential growth in driver population, total miles travelled and auto ownership	●	⊗	

TREND	TRANSPORTATION IMPLICATIONS			RAIL A	IMPACTS	
					B	C
o Increase in the number of divorces, separations and single parent households	o Could limit financial resources to own personal transportation, thus need for public transportation (captive riders)			●	●	
o Continuing pattern of inter-Provincial migration (Quebec to Ontario; Ontario to Western Canada)	o Potential increase in rail and air trips for visiting friends and relatives particularly in adjacent Provinces; Increase in the volume of inter-Provincial travel					●
o Continued preference for single family low density residential dwellings	o Inefficient urban structure for providing efficient public transportation service. Encourages auto dependence and dominance			●	⊗	
o Preference for suburban and ex-urban residential locations coupled with overall sprawl of settlement over large extensive areas; spatial segregation of land uses	o Because of longer travel distances, total vehicle miles travelled would increase; decrease in density inhibits urban commuter transit ridership potential			●	⊗	
o Travel and transportation consumes constant proportion of household expenditures	o Continuing reliance upon energy intensive modes			●	⊗	⊗
o Fewer young adults of cottage age	o Decline in visits to Family, Friends by college students in residence					⊗

TRENDS	TRANSPORTATION IMPLICATIONS			RAIL IMPACTS		
				A	B	C
o Several urban rail lines are not aligned to serve recreational, work trip purposes	o Limited multiple utilization of multiple use corridors; high cost of developing new rail lines				⊗	
o Growth in marriage breakdown; single parent families	o More trips per capita to satisfy basic needs of smaller size households; increased work trip rates				◐	◐
o Increasing number of smaller families and childless families	o More time for non-school trip purposes; more leisure and/or non-travel activities			●	⊗	⊗

SUMMARY OF TRANSPORTATION PREFERENCES AND CHOICES

TRENDS	TRANSPORTATION IMPLICATIONS		RAIL IMPACTS		
			A	B	C
o Predominant tendency toward automobile travel for all market sectors and all types of person trips	o Market captured by the public modes, only if and when mode shift becomes necessary		●		
o Distribution of trips among modes between a city pair vary with the place of origin	o Between two cities, the demand for a particular mode will be much greater in one direction only, not efficient on return trip		●		
o Air travel is mainly comprised of business people while non-business travellers tend more towards use of ground modes	o Increase in leisure time may increase the number of pleasure trips and usage of ground modes			●	●
o Older age groups tend towards rail/bus travel; auto usage definitely decreases for this age group	o Modest short range increase in rail/bus usage and service to meet special needs of the elderly; impact largely in long range only			●	●
o Increased female labour force participation rates, female travel	o Decline in rail and bus travel; possible increase in auto and air business travel		●		⊗
o Higher levels of education and income are correlated with more business travel as well as total travel	o With increasing formal education, greater overall tendency to travel per capita Generation of higher trip volumes		●		

TREND	TRANSPORTATION IMPLICATIONS		RAIL IMPACTS		
			A	B	C
o Those not in labour force tend to travel by bus whereas those employed are more likely air and auto travellers	o Increased auto and air travel volumes with overall growth in total employment and labour force participation rates				
o Long distance trips are pre-dominantly made by air (and auto) whereas rail, bus and air modes compete for medium and short distance travel sector	o Rail most competitive over medium and short travel distances				
o Under representation of employed males (all age groups) in rail traffic	o Potential target group for rail advertising/promotion campaign				
o Increase in leisure time (4 day work week) and corresponding increase in length of stay	o Rail and air modes used for longer length of stay whereas same day return by bus and auto				
o Business travellers are concerned with time, regularity, reliability and frequency of service	o Auto and air modes presently best suit these concerns. Other modes must address these concerns in order to attract the business traveller			(X)	(X)
o Non-business travellers are concerned with cost as well as speed and comfort. Auto travel is perceived to be least costly. Bus and rail are also inexpensive	o Importance of relative perceived costs in choice of modes. Competition stiff between rail, air, bus and auto				

TREND	TRANSPORTATION IMPLICATIONS			RAIL IMPACTS		
				A	B	C
o Preference for convenience, comfort, time effectiveness of transportation for shopping, medical, personal business trips	o Continuing reliance on auto for urban and inter-city travel			●	⊗	⊗
o Service attributes are significant in choosing a particular mode while service quality will maintain that traveller as a allegiance to that mode	o Currently air and auto offer greater service convenience, comfort			●		
o Perceived attributes of modes: Auto - Convenient, cheap air - fast, expensive bus - inexpensive, uncomfortable rail - spacious, slow	o Mode choice is based to a greater extent on perceived characteristics. In order to obtain a desired mode shift these perceptions must be altered			●		
o slowdown in rate of growth of business; employment; markets	o No major expansion of business travel; no modal diversion except perhaps telecommunications substitution			●		

VI. POLICY IMPLICATIONS WITH EMPHASIS ON RAIL

The implications of these changing lifestyle patterns and transportation behaviour trends upon the future of transportation in general and upon rail transportation in particular have been identified and documented in the preceeding three chapters. A number of specific near term rail planning and policy issues have been identified in chapters III and IV and summarized in chapter V, given the assumption of no significant variations from today's general lifestyle patterns of work, leisure, energy consumption, value systems, family structure, and allocation of household and personal resources.

Conclusive answers to questions about the policy planning implications of these lifestyle trends, forecasts and outlooks upon rail transportation in particular are limited by six constraints:

1. The future is uncertain. As noted on page 7 this analysis assumes a general continuation of lifestyle trends: this includes, then, no major shifts in real energy costs (as a proportion of family budgets), in transportation infrastructure, in modal choice availability or in levels of service. These conditions may or may not hold in the future.
2. Abrupt systemic societal transformations (or paradigm shifts) are the exception rather than the rule. In this analysis, care has been taken to caution against expectations of massive or long-lived shifts in mode choice, mobility demands and travel propensity in the short space of a few years. Both totalitarian and democratic societies have built in inertias in the behaviour patterns of their citizens.
3. Society is complex. Some of us are buying cottages; others are recreating closer to home. Some are buying third or fourth cars for our household; other rely on

other modes of transportation, after selling their automobile(s). These trends often are simultaneous and flatly contradictory. If we are in the midst of profound behavioural changes, it is hard today to predict even the overall shape of the outcome in 1985.

4. This analysis has really focused upon person movement. Policy conclusions with respect to goods movement need an analysis of their own.
5. No attempt has been made to articulate desirable patterns of Provincial travel or ideal trade-offs between rail, roads, schools, hospitals and other means of society realizing its objectives.
6. Other major factors are not addressed in this study but are the terms of reference for other working papers in this series.

Given all the above constraints, there are seven major conclusions that can be made about the implications of changing lifestyles upon short range rail planning and policy issues, for consideration by the Task Force:

1. Rail Has A Role

The rail mode has a role to play in Ontario's transportation system for the movement of people and goods. That role, however, is one limited by the availability, nature, location and cost-effectiveness of rail service and infrastructure in Ontario. That role also is limited by the public's value system, perception of modal choice attributes, and decision choices between modes for specific types of trips.

In certain locations and for certain types of trips, rail may be the most efficient mode for a traveller.

In general, however, without significant changes in lifestyles or factors (such as energy price and availability) affecting travel behaviour, rail may not be able to realize a constant or increased share of overall travel growth.

2. The Extent and Location of
Rail's Potential Role

A variety of lifestyle attitudes, perceptions and behaviour patterns as well as explicit and implicit transportation choices strongly suggest that rail transportation is a limited transportation alternative for many types of trips and tripmakers, given today's patterns of work, leisure and travel. Rail transportation overall is a means to an end. Enhancement of lifestyle is that end. Few people travel by rail as an end unto itself.

It should be recognized that rail cannot and will not serve everyone in the Province. The need is to establish its role as a desirable alternative in select metropolitan and intercity jurisdictions particularly as a means of

longer distance and longer duration public transportation. Location and market specific improvements to the rail system may be more cost-effective than overall general rail systems improvements in order to meet the public's needs for comfort, convenience, dependability and other demands of a transportation system. Construction of entirely new rail lines is a very expensive process.

It is likely that the Windsor to Montreal corridor will continue to sustain higher rail traffic and a differentiated level of service compared, for example, to north-south routes that intersect this corridor. Likewise, Northern Ontario may not be able to sustain the same level of service (based on observed rail passenger volumes between city pairs, need and the extent to which the Province is willing to subsidize the system) as other corridors with the Province.

3. Metropolitan Regions: Modal Competitiveness

Much of Ontario's population, housing and travel growth is occurring in and around a relatively few major urban areas that are called "metropolitan regions". Despite the growth projections for travel in these metropolitan regions, the prospects for rail in such locations are limited. Limiting factors such as core area population declines; the suburbanization of low density growth; increased suburb-suburb and suburb-exurban cross commuting; and general patterns of segregation of land uses help contradict any overall conclusion that there is significant growth potential for commuter rail in major urban regions.

Many existing rail alignments or rights of way are not well oriented to serve or take advantage of the density and arrangement of development: either peripheral growth or infilling. In addition, there are well-entrenched neighbourhood preservation sentiments among residents groups in many built-up urban areas that inhibit introduction of new service.

The bulk of today's commercial, industrial, residential and transportation activity patterns suggest major difficulties for urban rail to maintain (let alone increase) its share of a growing urban passenger travel market. Today's infrastructure, economy and public lifestyle choices may not permit the kinds of changes tomorrow that will alter this assessment. In short, even with short range improvements in commuter rail service, rail may not be competitive with the many choices of modes available in urban regions.

Provision and maintenance of rail service across municipal boundaries within metropolitan regions should reflect locations of strong current or future demand. Within metropolitan regions, these locations are limited to servicing certain core (or downtown) districts, certain near-urban sports/entertainment/theme parks, and certain multi-modal transportation terminals.

4. Intercity Travel Initiatives

Rail faces strong competition from other modes for intercity passenger travel. It is unlikely that intercity rail will offer more competition for such markets as cottage destination trips. Intercity rail may be appropriate for major cultural/recreational trip-making; for the select transcontinental leisure package traveller; and for relatives and friends to visit one another, often across Provincial or regional boundaries.

Service may well be the most important factor in determining public acceptance of intercity rail travel promotional activities. The public's current travel habits; reliance upon the automobile; attitudes toward energy conservation in the transportation sector; and limited sensitivity to travel costs (among the other modal choice determining factors) suggests that service considerations should be paramount for any program to enhance intercity rail traffic.

5. Modal Integration:

Growth in rail ridership often is dependent upon efforts to improve the overall integration of rail service with air, bus, other transit, and the auto mode, both for intercity and metropolitan travel. For intercity travel, the paramount need is for improved accessibility to the rail system by the bus and air modes, as well as for improved levels of service. In the case of metropolitan travel, there is a need for better co-ordination of land use and transportation planning. This includes inter-modal terminals, integrated cross-municipal-boundary services (rail, transit), and consistent auto parking standards and fee policies as well as better mixes of land uses. This also includes more concentrations of mixed land use and more high density development both along commuter rail corridors and at station modes.

6. Market Segmentation Approach

If the strategy of the Task Force is to enlarge rail's proportion of total travel, it would seem that the market sought is primarily longer distance and longer duration travel. What is required is a choice between two basic markets:

those who are heavy users of rail at present

- senior citizens
- women
- residents of major centres travelling to or through other major corridors and centres
- non-business trip purpose travellers

or those who are proportionately under-represented as rail customers

- men
- the employed
- those living in small and intermediate size centres
- business trip purpose travellers.

What is important is further study and testing about whether to aggressively market rail in locations and among clients that rail already serves or whether to attempt to develop new customers and market locations. Such a testing program should likely follow a decision about how much modal choice is desirable, necessary and appropriate in metropolitan and intercity travel. Moreover, these decisions should weigh the costs of these benefits to the socio-economic well-being of both users and non-users.

7. A Rail Promotion Campaign:

Selective government sponsored publicity, both in general and for specific market segments and corridors, may offer some leverage for increasing rail's share of total travel. Such publicity could be aimed at increasing society's general awareness of the potential and specifics of rail service as well as reaching certain market segments that may choose rail as a mode of travel.

For example, it has been noted that men and the employed are generally under-represented as rail passengers. As well, there may be some potential to attract the "undecided" or variable mode traveller to rail, particularly on existing high volume, high capacity corridors. In addition, rail ridership seems to be proportionally under-represented between intermediate size centres outside the major Windsor-Toronto-Montreal axis. Finally, it should be remembered that businessmen and vacationers may be more ready and willing to pay more for rail service, if this is their preferred mode of travel.

There is no evidence that such a media campaign will achieve desirable results. The creative challenge will be to direct that publicity into areas, corridors and regions where rail service will benefit users and non-users alike, consistent with society's full list of prioritized needs and wants.

With energy and travel cost concerns not being paramount today as factors in trip-making decisions, this government sponsored information program will have to address a variety of other lifestyle descriptors, including comfort and convenience. Current realities in terms of energy prices, automobile dependence and lack of public acceptance of rail as a social good (rather than a cost-recovery rationale for service) may hinder the effectiveness of such a rail promotion campaign.

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